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ORIGINAL ARTICLES.

EXPERIMENTS WITH THE FORMALIN TREATMENT FOR STREPTOCOCCUS INFECTION IN RABBITS.

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Since the new formalin treatment for streptococcus infection has received so much attention in the past few weeks, as the result of the successful issue of a case of streptococcus septicemia, recorded by Dr. Barrows, of New York, and numerous efforts on the part of physicians throughout the United States to produce similar results have been made with doubtful effect, we felt it necessary to determine the effect of the proposed treatment upon animals, hence our efforts have been directed in these channels to verify the efficacy of formalin in different dilutions against streptococcus infection. We propose to ascertain the effect of formalin upon the blood and metabolism of normal animals, also upon those in which there is a streptococcus infection.

We have also tried and shall continue to note the comparative value of normal saline solution and sterilized water as treatment in cases of streptococcus infection. It is our belief that a 1-5000 dilution of formalin in water is not sufficiently strong to have any specific effect upon micro-organisms in the animal economy. If any bacteriocidal effect may be expected from formalin solutions, the strength to be employed, it would seem, must be increased. We have found in our experiments upon normal rabbits that a formalin dilution of 1-500 is well borne when given in doses proportional to a litre in man; and as a result of this observation, we have in our later experiments upon streptococcus infection used a dilution of 1-2000 instead of 1-5000, as was originally proposed, as we think this is a safe strength to work with. The effect of this may be seen by examining Chart No. 5.

Thus far, we have had two apparent recoveries as a result of this treatment. One rabbit of this series (Chart No. 5) received three successive intravenous injections of a 1-2000 dilution. This rabbit, however, died on the eleventh day, when according to all evidences noticeable by temperature records and observations, he had become convalescent. The red rabbit of this series was used as a control. While the result in this series appears slightly favorable, yet by comparing it with the normal saline vs. streptococcus series (Chart No. 8) it does not show much improvement over the normal saline treatment, as in this series (Chart

No. 8) the green rabbit is still alive. The red rabbit died the day after the saline solution was employed. The yellow rabbit whose crisis of temperature was 106.2 was reduced to 103.8 the following morning after the first intravenous injections of saline, and then entered a state of collapse, during which time he was given a second injection of normal saline, but died in the next few hours. The blue rabbit of this series was not injected with normal saline, for the reason that she seemed to possess immunity, and was never sufficiently septic to warrant treatment. We gave her a second dose of streptococcus culture which produced only a temporary rise of temperature. This rabbit without any treatment has since become normal.

The temperature produced in these rabbits were due to streptococcus infection, as was shown by pure cultures obtained from the blood. Blood cultures made on the eleventh day from the formalin vs. streptococcus series showed that the number of streptococci in the circulation was greatly reduced, as the plants from a loopful of blood upon blood serum media at this time, only showed ten colonies in one tube and thirteen in another, whereas in our first plants we obtained a beautiful filmy growth, as is obtained when transplanting a pure culture.

Our experiments with formalin dilutions alone in normal rabbits have thus far revealed nothing worthy of note, as all that can be said as the result of observation is, that their temperatures fluctuate but slightly, and the rabbits seem perfectly lively and unaffected. The dilutions which were employed varied in their strengths from 1-5000 to 1-500, all receiving normal doses. It is our intention to increase the strengths of these solutions to one per cent., as we know formalin to be an effective germicide in stronger dilutions than have thus far been employed. In this way we expect to find the strength best tolerated and the lethal dose. In this series we are making observations of the effect of formalin upon the blood, as we know it has hemolytic properties. Cushny in his work on pharmacology, states that formalin reduces hemaglobin to hematin, and is then eliminated by the kidneys. In our test tube experiments we find that formalin splits hemaglobin into meta-hemaglobin and hematin. This action is slow, however, and only occurs in the stronger solutions, as all that could be noticed from the effect of the weaker dilutions of formalin was the condition known as laking. In our future observations upon the blood of these formalin rabbits, we shall direct our attention more particularly to its effect upon the cellular elements.

SUMMARY.

I. Thus far we have injected thirteen rabbits with formalin ranging in strengths from 1-5000 to 1-500, and with the exception of three, which were killed for examination, and one that died from causes other than those produced by formalin, the other nine are living and apparently in a normal condition.

II. A series consisting of four streptococcus rabbits have been treated with normal saline solution, two have died and one is apparently passing into a state of recovery, though not in the best condition at this time. The fourth of this series proving immune was not treated.

III. Two streptococcus rabbits were treated with 1-5000 dilution of formalin in normal saline solution; one died the day after treatment, and the other the third day after. Two rabbits of this series were allowed to go untreated and died

on the second day, or about thirty-six hours after inoculation, thus showing the culture which is being used to be intensely virulent.

IV. Three streptococcus rabbits were treated with a 1-2000 dilution of formalin in water. Two recovered and one died after three intravenous injections of the above dilution. This treatment seemed to control the infection somewhat, as the temperature was greatly reduced and life prolonged until the eleventh day. The fourth rabbit of this series, which was allowed to go as a control, died in thirty-six hours.

By examining Chart No. 4, the disinfecting action of formalin in its different dilutions against streptococcus can be seen. In our final report we shall have this chart complete and show its disinfecting action in all the strengths from 1 per cent. to 1-5000, also the effect of distilled water and normal saline solution upon the vitality of this organism.

Up to this date our experiments have necessarily been limited, hence without attempting to draw conclusions, we simply offer this report to those who are interested in this treatment, with the hope that they may profit by our experience.

CHART No. 2.

STREPTOCOCCUS SERIES NO. 1.

1-5000 Dilution of Formalin in Normal Saline Solution vs. Streptococcus Septicemia.

STARTED JANUARY 23, 1903.	YELLOW.	RED.	BLUE.	GREEN.
Weight	1900 Grams.	2150 Grams.	1750 Grams.	1575 Grams.
Sex	Male.	Female.	Female.	Female.
Dose of streptococcus emulsion inoculated	1 c.c.	1 c.c.	1 c.c.	1 c.c.
Method of inoculation	Intrav.	Intrav.	Intrav.	Intrav.
Temperature before inoculation	101.8	103.6	102.8	102.6
1st day	a. m. 105.0 p. m. 105.4	106.4 105.9 15 c.c. of a 1-5000 in n/saline.	104.9 104.9	105.6 105.8 13 c.c. of a 1-5000 in n/saline.
Formalin employed				
2nd day	a. m. DEAD. p. m.	98.2 DEAD.	DEAD.	105.5 104.3
3rd day	a. m. p. m.			101.4= 9 a. m. 99.6=11 a. m. 98.6= 5 p. m. Died= 7 p. m.
Autopsy weight	1700 Grams.	1764 Grams.	1564 Grams.	1349 Grams.
Actual loss of weight	200 Grams.	386 Grams.	186 Grams.	226 Grams.

The emulsion used to inoculate these rabbits was made by taking four loopfuls of a 24-hour blood serum culture of streptococcus pyogenes and mixing thoroughly with 4 c.c. of normal saline solution.

CHART No. 5.

STREPTOCOCCUS SERIES No. 2.

1-2000 Aqueous Formalin Dilution vs. Streptococcus Septicemia.

STARTED JANUARY 26, 1903.		YELLOW.	RED.	BLUE.	GREEN.
Weight		1940 Grams.	2140 Grams.	2000 Grams.	1850 Grams.
Sex		Male.	Female.	Male.	Female.
Emulsion of streptococcus inoculated....		Intrav.	Intrav.	Intrav.	Intrav.
Temperature before inoculation.....		102.6	103.0	102.0	103.2
1st day	a. m.	103.6	105.4	102.8	105.2
	p. m.	103.3	104.9	104.1	106.1
2nd day	a. m.	107.0	DEAD.	103.0	105.8
	p. m.	105.9		103.2	106.6
1st formalin injection		33 c.c. 1-2000 Intrav.	Control.	40 c.c. 1-2000 Intrav.	31 c.c. 1-2000 Intrav.
3rd day	a. m.	104.6		102.6	104.4
	p. m.	104.9		101.3	102.9
4th day	a. m.	104.6		101.4	105.8
	p. m.	105.2		100.4	107.5
2nd formalin injection		33 c.c. 1-2000 Intrav.			31 c.c. 1-2000 Intrav.
5th day	a. m.	104.0		100.6	105.8
	p. m.	105.4		101.4	104.0
6th day	a. m.	106.4		102.5	102.8
	p. m.	104.0		101.8	102.5
3rd formalin injection		33 c.c. 1-2000 Intrav.			
7th day	a. m.	102.6		103.4	101.0
	p. m.	104.4		102.4	101.7
8th day	a. m.	103.4		103.3	102.6
	p. m.	103.2		102.6	101.8
9th day	a. m.	101.9		102.9	102.8
	p. m.	99.5		100.0	102.8
10th day	a. m.	101.8		101.8	102.0
	p. m.	101.6		101.4	102.8
11th day	a. m.	DEAD.		101.9	101.7
	p. m.			101.4	102.6
12th day	a. m.			101.4	102.8
	p. m.			101.4	102.8
		3 injections of formalin.	Control.	1 injection of formalin.	2 injections of formalin.

RECORD DISCONTINUED.

CHART No. 8.

STREPTOCOCCUS SERIES No. 3.

Normal Saline Solution vs. Streptococcus Septicemia.

STARTED JANUARY 30, 1903.	YELLOW.	RED.	BLUE.	GREEN.
Weight	2215 Grams.	2165 Grams.	1710 Grams.	2116 Grams.
Sex	Male.	Male.	Female.	Male.
Emulsion of streptococci inoculated	Intrav.	Intrav.	Intrav.	Intrav.
Temperature before inoculation	103.1	103.0	102.8	102.6
Temperature four hours after inoculation with streptococcus	102.7	101.1	102.0	103.8
1st day a. m.	106.2	105.9	103.4	104.4
..... p. m.	106.2	105.7	103.0	104.5
Normal saline employed.....	39 c.c. Intrav.	38 c.c. Intrav.		
2d day..... a. m.	103.8	101.6	102.3	104.8
..... p. m.	96.8	DEAD.	102.4	106.5=4 p. m.
Normal saline employed.....	40 c.c. n/saline			37 c.c. n/saline
	DEAD.			105.0=6 p. m.
3rd day..... a. m.			104.9	103.0
..... p. m.			104.4	105.7
4th day..... a. m.			102.2	104.8
..... p. m.			102.6	105.0
5th day..... a. m.			101.7	104.4
..... p. m.			101.7	104.0
6th day..... a. m.			101.3	105.3
..... p. m.			103.0	105.2
7th day..... a. m.			101.6	104.5
..... p. m.			103.9	104.2
8th day..... a. m.			102.4	103.7
..... p. m.			102.6	103.0
9th day..... a. m.			103.4	102.0
..... p. m.			100.8	100.0
	Two injections of saline.	One injection.	Immune.	One injection of saline.

RECORD UP TO DATE.

CHART No. 3.

FORMALIN SERIES No. 1.

In this series a 1-5000 dilution of formalin in normal saline solution was used and 500 c.c. was considered as a normal dose.

JANUARY 20TH.		YELLOW.	RED.	BLUE.	GREEN.
Weight		1024 Grams.	1870 Grams.	1918 Grams.	1525 Grams.
Sex		Female.	Male.	Female.	Male.
Normal dose in ratio of weight		9.03168 c.c.	16.4734 c.c.	16.91676 c.c.	13 4505 c.c.
Dose Inoculated		9.03168 c.c.	24.7101 c.c.	33.83352 c.c.	33.62625 c.c.
Proportion to normal dose		N 1	N 1½	N 2	N 2½
Method of inoculation		Intrav.	Intrav.	Subcut.	Subcut.
Temperature before inoculation		101.2	102.2	102.4	101.2
1st day	a. m.	102.6	102.2	103.8	103.6
	p. m.	102.8	104.2	104.2	103.5
2nd day	a. m.	102.2	101.8	103.0	102.8
	p. m.	102.2	103.6	102.8	94.6
3rd day	a. m.	103.0	102.8	102.8	94.8
	p. m.	103.0	102.6	102.4	96.0
4th day	a. m.	101.4	103.2	102.4	DEAD.
	p. m.	101.6	102.5	102.1	
5th day	a. m.	100.4	103.5	102.4	
	p. m.	102.3	103.7	102.4	
6th day	a. m.	99.9	103.0	102.9	
	p. m.	Killed for exam.	Killed for exam.	Killed for exam.	

CHART No. 6.

FORMALIN SERIES No. 2.

Testing the Different Strengths of Formalin in Normal Rabbits.

STARTED JANUARY 28, 1903.		YELLOW.	RED.	BLUE.	GREEN.
Weight		1245 Grams.	1685 Grams.	1140 Grams.	1652 Grams.
Sex		Female.	Female.	Male.	Female.
Strength of formalin employed		1-1000	1-2000	1-3000	1-4000
Normal dose in ratio to weight		22 c.c.	29.7 c.c.	20 c.c.	29 c.c.
Method of inoculation		Intrav.	Intrav.	Intrav.	Intrav.
Temperature before inoculation, Jan. 28		103.3	101.6	101.3	102.7
1st day	a. m.	101.4	100.4	101.8	102.4
	p. m.	102.2	101.4	102.6	103.4
2nd day	a. m.	101.6	101.5	101.4	102.5
	p. m.	102.0	101.5	101.3	103.0
3rd day	a. m.	101.6	98.4	102.2	102.2
	p. m.	102.4	102.4	102.0	103.0
4th day	a. m.	102.0	99.4	102.7	103.0
	p. m.	102.9	102.6	102.4	103.1
5th day	a. m.	101.4	102.4	101.8	102.9
	p. m.	101.3	103.2	102.4	102.3
6th day	a. m.	102.4	101.2	102.6	103.2
	p. m.	101.4	101.8	102.2	103.6
7th day	a. m.	103.2	99.9	103.0	103.2
	p. m.	103.2	101.8	101.2	103.3
8th day	a. m.	102.1	98.4	102.6	102.8
	p. m.	100.4	101.6	101.5	103.
9th day	a. m.	102.0	98.4	101.6	102.8
	p. m.	100.2	101.4	101.9	102.6
10th day	a. m.	100.4	98.4	101.4	103.1
	p. m.	101.0	98.4	100.9	102.8

RECORD DISCONTINUED.

CHART No. 9.

FORMALIN SERIES No. 3.

Testing the Different Strengths of Aqueous Formalin Dilutions in Normal Rabbits.

STARTED JAN. 31, 1903.		YELLOW.	RED.	BLUE.	GREEN.	VIOLET.
Weight		1445 Grams.	1750 Grams.	1407 Grams.	1700 Grams.	2244 Grams.
Sex		Male.	Female.	Male.	Male.	Male.
Method of inoculation		Intrav.	Intrav.	Intrav.	Intrav.	Intrav.
Strength of formalin dil. employed		1-500	1-600	1-700	1-800	1-900
Normal quantity used.....		26 c.c.	31 c.c.	25 c.c.	32 c.c.	40 c.c.
Temperature before inoc- ulation, January 31		102.4	102.7	100.0	102.6	102.4
1st day.....	a.m.	102.0	102.4	101.7	102.4	101.2
	p.m.	102.4	102.2	101.4	102.8	102.7
2nd day.....	a.m.	101.4	101.7	102.5	102.0	102.2
	p.m.	101.6	102.4	102.4	102.4	103.2
3rd day.....	a.m.	102.4	102.8	101.0	102.5	102.5
	p.m.	102.9	103.2	102.4	103.4	102.
4th day	a.m.	102.3	103.3	102.2	103.1	102.3
	p.m.	103.0	103.8	103.0	103.4	102.1
5th day.....	a.m.	102.0	102.8	101.8	103.6	102.6
	p.m.	101.7	104.6	102.4	103.4	101.9
6th day.....	a.m.	102.2	103.2	101.6	103.2	102.0
	p.m.	103.0	104.4	102.1	103.4	102.6
7th day	a.m.	102.1	104.4	102.0	104.4	102.4
	p.m.	103.0	104.4	101.6	104.7	103.0
8th day	a.m.	102.6	104.8	102.0	104.4	102.4
	p.m.	102.6	104.4	102.1	105.4	102.2

RECORD UP TO DATE.

CHART No. IV.

Disinfecting Action of the Various Aqueous Dilutions of Formalin on Streptococcus Pyogenes.

DILUTIONS IN WATER.	TIME OF CONTACT.															
	5 Min.	10 Min.	15 Min.	20 Min.	30 Min.	1 hr.	2 hrs.	3 hrs.	4 hrs.	6 hrs.	8 hrs.	10 hrs.	12 hrs.	14 hrs.	16 hrs.	18 hrs.
1-100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1-200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1-300	O	O	O	O	O	—	—	—	—	—	—	—	—	—	—	—
1-400	+	+	+	+	+	+	—	—	—	—	—	—	—	—	—	—
1-500	+	+	+	+	+	+	+	+	+	O	O	O	O	O	O	O
1-600	+	+	+	+	+	+	+	+	O	O	O	O	O	O	O	O
1-700	+	+	+	+	+	+	+	O	O	O	O	O	O	O	O	O
1-800	+	+	+	+	+	+	+	+	—	—	—	—	—	—	—	—
1-900	+	+	+	+	+	+	O	O	O	O	O	—	—	—	—	—
1-1000	+	+	+	+	+	+	+	+	+	—	—	—	—	—	—	—
1-2000	+	+	+	+	+	+	+	+	+	O	—	—	—	—	—	—
1-3000	+	+	+	+	+	+	+	+	+	+	—	—	—	—	—	—
1-4000	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1-5000	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	O
Sterile Water.....	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	O
Normal Saline Soluti'n	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	O

+ = growth. — = no growth. O = to be verified.

OPERATIONS FOR CANCER OF THE MOUTH AND NECK.¹

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PRELIMINARY REMARKS.

Of the numerous operations known to the surgical art none have ever been held in higher estimation nor have had more apprehensive consideration than the surgical interventions upon the neck. By the earlier physicians all surgical procedures of this region were almost invariably regarded as pre-eminently fatal, and as such, largely, if not totally, condemned.

STATISTICAL STUDY.

(a) *Lip*.—In the operations for carcinoma of the lips, the statistics appearing prior to 1885, including those of Thiersh, Billroth, Bergmann, Winniwarter, Koch and Partsh, are as follows: Total 535 cases.

Operative Deaths.	Recurrences.	Three-Year Cures.
44 out of 535 cases or, 8 per cent.	128 cases out of 434, or 37 per cent.	108 out of 389 cases, or 27 per cent.

A fair comparison of the results prior to 1885 may be found in the report of the clinic of Von Bruns. From this clinic Wormer in 1886 published a report of two hundred and seventy-seven cases of carcinoma of the lip operated up to that time. In this statistics are to be found as follows:

Operative Deaths.	Recurrences.	Three-Year Cures.
16 out of 277 cases, or 5.7 per cent.	101 out of 277 cases, or 35 per cent.	106 out of 277 cases, or 37.7 per cent.

Loos in 1898 supplemented this report of Wormer by two hundred and sixty additional cases collected in the same clinic since the year 1886. In this the statistics given are:

Operative Deaths.	Recurrences.	Three-Year Cures.
1 out of 141 cases, or 6 per cent.	47 out of 141 cases, or 30 per cent.	93 out of 141 cases, or 65 per cent.

Taking the tables of Von Bruns for the comparison between the results obtained prior to and subsequent to 1886, it is seen that the operative death-rate decreased 5 per cent. and the recurrence 6 per cent., while the number of three-year cures increased over 27 per cent. In the years prior to 1886 the extirpation of the submental and submaxillary glands was practiced only when enlarged and hard. Since 1886 it has been much more frequently, though not constantly, practiced, and since 1895 the resection of the submental and submaxillary glands, through an incision extending between the mandibular angles, has been employed as a routine procedure.

(b) *Tongue*.—The statistical compilations of the operative treatment of the tongue appearing prior to 1885 are:

¹ Address on Surgery, read before the Mississippi Medical Society at Kansas City, October 18, 1902.

	Operative Deaths.			Cures.	
Winniwarter,	46 cases,	19 per cent.	4 out of 46,	8.6 per cent.	(1878).
Steiner,	26 cases,	15 per cent.	1 out of 16,	6 per cent.	
Woeffler,	82 cases,	17.6 per cent.			(1881).
Budinger,			10 out of 64,	15 per cent.	(1881).
Butlin,	70 cases,	11.4 per cent.	6 out of 70,	8.5 per cent.	(1882).
	224	15.7 per cent.		8	per cent.

Since then have appeared the statistics of

Whitehead,	39 cases,	4.3 per cent.			
Sachs. Kocher,	57 cases,	10.5 per cent.	3 out of 57,	34.3 per cent.	(1893).
Binder Kroenlein,	35 cases,	20 per cent.	8 out of 33,	24 per cent.	(1896).
Butlin,	102 cases,	9.7 per cent.	35 out of 95,	36.8 per cent.	(1898).
	223	11 per cent.		32	per cent.

While in these statistics a sharp delineation as to the period of operation is not to be drawn, as many of the operations reported since 1885 were in reality performed prior to this time, the difference in the results is striking. The rate of the operative mortality in both periods is approximately the same, the number of three-year cures since 1882, however, is found to have been increased four-fold. The reason for the similarity in the percentage of mortality rates in these two periods, with a simultaneous increase in definite cures, is to be attributed to the more radical operation which has been more frequently practiced since 1885.

Tonsil.—From the statistics of Newman Housell, Watson, Cheyne and his own, Butlin was able to analyze seventy-three operative cases for carcinoma and sarcoma. Of these fourteen, or 20 per cent., died of the effects of the operation. In fifty-four cases the further history showed the following:

Alive or dead with recurrence	-	-	20
Dead of cancer elsewhere	-	-	3
Well from one to three years	-	-	8
Well more than three years	-	-	9, or 17 per cent.

Cancer of other parts, such as the floor of the mouth, the mucous membrane covering the jaw, etc., have not been reported in sufficient series for separate study. The cases reported show operative results very similar to cancer of the tongue, tonsil and lip.

Cancer of the Upper Jaw.—The report of the clinic of Prof. Koenig is the best large material available for study. In this clinic there have been fifty-seven operations, with nineteen or 33 per cent. of operative deaths, and nine or 15 per cent. cures. All cases have been followed and the report is complete. There was neither affection of the lymphatic glands, nor removal of them in any of the successful cases.

Recurrences occurred *in situ*. Acting upon this, the operations were most extensive. In two of the successful cases the eyeballs were removed. In one the skin of the face was involved and ulcerated. In several there was widespread ulceration of the mouth. But one reoperated case was cured. Prof. Koenig strongly recommends removal of the entire bone in all cases, even the

orbital plate. The whole hope of the operation seems to rest upon a complete removal of the primary growth.

(b) *Thyroid Gland*.—The statistical tabulations for the operative treatment of malignant disease of the thyroid gland, which as given by most authors include both carcinoma and sarcoma, both being stated to be equally malignant, are:

	Operative Deaths.	Recurrences.	Cures.
Braun, 22 out of 34, 64.7 per cent. (1882).		6 out of 8.	2 (11 and 6 months).
Kroenlein, 5 out of 11, 45.5 per cent. (1893).			
Czerny's clinic, 5 out of 33, 15 per cent.			5 (3-year cures).
Ref. not obtainable.			
Kochner, 6 out of 18, 33 ⅓ per cent. (1898).			

Butlin in 1900 published comparative statistical tabulations of seventy-nine operations and their results, which had been performed for malignant disease of the thyroid both prior to and subsequent to 1884. In these statistics:

	Early Series.	Later Series.
Died of operation,	30—62 per cent.	11—35 per cent.
Recurrence,	10	11
Three-year cures,	1— 2 per cent.	1— 4 per cent.
Unheard of and below three-year limit,	7	8
Total,	48	31

The high rate of mortality and the low percentage in three-year cures find their ready explanation in the high degree of malignancy in carcinoma and sarcoma of the thyroid gland. To the high malignancy of these tumors is also to be added the fact that these neoplasms most frequently supervene upon an existing goiter, so that, in many instances, the existence of the carcinomatous or sarcomatous affections escape detection until after the infiltration of the surrounding structures has occurred. This infiltration of the adjacent tissues occurs by direct contiguity. Commonly the carotid artery, internal jugular vein and vagus nerve are either singly or conjointly involved. Posteriorly the trachea and esophagus are also very frequently infiltrated.

The removal of the growth usually requires resection of one or more of the following structures: jugular vein, carotid artery, vagus nerve, trachea and esophagus.

Branchiogenic Carcinoma.—Of the various cancerous affections of the neck-bone, none are seemingly less amenable to surgical treatment than the branchiogenic carcinoma, first described by Volkmann in 1882. In a collection of forty-eight cases by Veau, of which thirty-one were operated, the results reported are:

Number of cases reported, thirty-one.

Deaths from the operation, five (or 16 per cent.).

Recurrences and deaths within one year, ten (33 per cent.).

Cases under three years and unheard from, sixteen (50 per cent.).

These operations are technically most difficult, and the growth is characterized by high malignancy.

In numerous instances intervention was no longer possible when the patients first presented themselves for treatment. These tumors early involve the great vessels and nerves. The adherence to the carotid artery and its infiltration is a less usual occurrence, but in three instances ulceration into the lumen of the carotid, causing instant death, is reported. Glandular metastases, however, does not usually occur. According to Veau, it was observed but nine times in forty-eight cases.

ANATOMICAL AND PHYSIOLOGICAL CONSIDERATIONS.

(a) *The Lymphatics.*—Carcinoma is to be considered not alone a local disease, but also an affection of the lymphatic system of the area involved. In former years only the glandular involvement of the lymphatic system was considered. Later microscopical studies showed that the lymphatic vessels, proceeding from the affected area to a lymphatic gland, as well as the vessels leading from such a cancerous gland, may also contain carcinoma cells. A mere enucleation of the gland can, therefore, no longer be regarded as an effective surgical procedure. To insure a complete extirpation of the carcinomatous affection it is necessary to remove not only the affected area and its lymphatic glands, but also the intervening area of tissues. The entire anatomical zone in which the lymphatic vessels course and in which the glands lie must be removed *en masse*.

The lymphatic system in the neck is largely in relation to its vessels, the carotid artery and internal jugular vein. The superficial glands are but rarely the seat of metastasis. The deep cervical glands, on the other hand, are very frequently involved. All resections of the lymphatics should be based on a radical technique. In the submaxillary triangle the submaxillary salivary gland is to be removed, as lymphatic nodes lie within its substance and lymphatic vessels are closely and intimately related to it; in the removal of the deep cervical nodes, an anatomical dissection of the carotid arteries, internal jugular vein and vagus is frequently necessary. As many lymphatic vessels are directly superficial to it, or are found within its fibres, the sheath itself should be removed, especially that portion of the sheath in relation to the internal jugular vein. All the connective tissue and fat around these structures should be resected. After a radical dissection, the arteries, vein and nerve are entirely separated, and lie directly on the muscular bed without the intervention of any fascia. By these means alone is it possible to extirpate the lymphatic vessels. Such a radical resection of the lymphatic system of the neck is known from clinical and experimental verifications not to be attended with any deleterious consequences. In the extirpation of the inguinal and axillary nodes it has been noted that a pseudo-elephantiasis in the leg or arm may at times occur. In the neck, however, no such effects have ever been observed.

(b) *Sterno-Mastoid.*—The thorough exposure of the deep cervical glands requires the division of the sterno-mastoid muscle. Neither division nor partial removal are followed by any subsequent deformities, such as torticollis. The synergistic action of the trapezius, splenius capitis, and other muscles fully compensate for the loss of the functional action of this muscle. After the division of the sterno-mastoid muscle the two ends readily unite, while in the partial resection fibrous tissue formation occurs in the interval. In the latter case there may be a depression on the superficial surface of the neck.

(a) *Spinal Accessory Nerve.*—The fear of a resulting post-operative torticollis, which has been expressed as occurring from the division of the spinal ac-

cessory nerve before its entrance into the muscle, has also not been clinically substantiated. Milton, in a collection of fifty such cases in which the nerve was severed at this point during the resection of tubercular cervical lymph nodes, carefully looked for resulting symptoms, but found none. The double nerve supply of this muscle, both the spinal accessory and a branch of the second cervical nerve innervating it, is the preventative factor against paralysis when either nerve is singly injured. In those instances in which the spinal accessory nerve is divided the total innervation is assumed by the second cervical nerve; in the absence of this the compensatory action of the synergistic muscles, already mentioned, would be sufficient. The ease with which this nerve may be severed is recalled by most surgeons. The nerve, at the point at which it enters the sterno-mastoid muscle, is almost completely surrounded by lymph nodes, which, when enlarged, are said to easily cause its compression against the transverse process of the atlas. This compression of the nerve, when of a sufficient duration, may be productive of a physiologic severance, so that the compensatory action of the second cervical nerve and the synergists to the sterno-mastoid is already assumed, when the anatomical division occurs.

(b) *Large Vessels.*—The jugular vein is the more frequently involved. The walls of the vein may, in most instances, be said to be almost simultaneously involved. The artery, which on the other gland is mobile within its facial tube, is not necessarily involved when the carotid sheath has been invaded by the malignant process. As a rule, it remains singularly free from carcinomatous infiltrations. The vein also partially overlaps the artery, anteriorly, and is more intimately related with lymph glands and vessels, offering a greater area for direct invasion.

The resection of the internal jugular vein should be unhesitatingly performed in every case in which there is even a doubt as to its involvement. In earlier years the ligation of this vessel was hypothetically assumed to cause grave disturbances; such as gangrene of one-half of the brain, face and neck. This view was shown later to be wholly wrong, and since it has been clearly demonstrated that no untoward symptoms follow this procedure.

(a) *The Common Carotid.*—Much more important is the ligation or partial resection of the common carotid artery. The importance of this vessel in the economy of the brain has also been greatly overestimated. Closure of this vessel was at one time thought to be almost invariably fatal. In the numerous statistics which have appeared on the subject of carotid ligation, these opinions were seemingly verified. A high mortality rate is usually reported by the discrepancies and diversities as to the exact percentage appear still more striking. In these different tabulations

Velpeau	reports	137 cases, of which	30 per cent. died.
Norris	"	"	50
Pliz	"	600	38
Le Fort	"	370	47
Wyeth	"	789	41
Friedlander	"	218	13
Reis	"	73	40
Schmidt	"	25	45
Zimmerman	"	64	13
Nieten	"	143	35
		2,419	35

The great variation in the mortality rate from 13 per cent. to 50 per cent. can most readily be explained by the fact that in these various collections cases of hemorrhage, aneurysms and other affections are all included and variously commingled. When considering that in ligation of this for hemorrhage, death is most frequently the result of the loss of blood, also that in aneurysms the arterial walls are diseased and have lost the required elasticity essential for the establishment of the collateral circulation, it becomes apparent that such statistics are inaccurate. Concerning wounds of the carotid artery there is an old adage that it requires two minutes to ligate this vessel and four minutes to bleed to death.

The high mortality rate of most statistics is furthermore increased by the inclusion of the cases of ligations performed in the pre-antiseptic times. In fact, most of these statistics were gathered during this period. Nieten, in a collection of fifty-seven cases of ligation, which were performed during the years from 1888 to 1893, and which, therefore, properly fall within the antiseptic period, reports a mortality rate of but 19.8 per cent. Zimmerman, from sixty-four cases, also falling within this period, obtained a mortality rate of 13 per cent. From a closer analytical study it is apparent that all statistics which have as yet appeared on the subject of carotid ligation are utterly valueless, with reference to any deductions as to the results of the permanent occlusion of this vessel *per se* when performed during extensive operations upon the neck.

A much more definite conclusion as to the immediate effects, and as to the direct mortality rate, is to be derived from the reports in which the carotid was deligated in such affections as epilepsy, neuralgia, etc.

The following collection is illustrative:

	No. of Cases.	Cured.	Died.
Velpeau	3	3	..
Norris	8	8	..
Pilz	34	33	1 (3 per cent.)
Wyeth	40	38	2 (5 per cent.)
	—	—	—
Total	85	82	3

Mortality rate 3 per cent.

In ligation of the carotid artery preliminary to or in the course of major operations upon the neck the following are illustrative:

	No. of Cases	Cured.	Died.
Velpeau	26	16	10 (38 per cent.)
Norris	18	12	6 (33 per cent.)
Pilz	59	38	21 (29 per cent.)
	—	—	—
Total	103	66	37 (36 per cent.)

Mortality rate 36 per cent.

The comparison with the preceding shows that it is impossible to differentiate the various factors. A more exact conclusion as to the immediate effects of deligation of the carotid artery, during operative resections of the neck, is to be obtained from the statistics of Keyher, of St. Petersburg. This collection of carotid ligations consists solely of those done as a preliminary measure to major

operations on the neck. To avoid cerebral complications pressure was applied over the artery during ten to fifteen minutes of every hour for eight days prior to the operation. In twenty-one such ligations but one death resulted. Wel-jaminaw, in 1881, reports twenty additional cases from this same clinic, making a total of forty-seven cases with but one death, or 2 per cent.

From the various statistics at hand for the mortality of complicated ligation of the carotid artery only two sources are available. One is the summary of these cases in which the deligation was performed for sundry nervous affections such as epilepsy, neuralgia, etc., the other, the collection of Keyher, just mentioned. It can be assumed that 2 per cent. or 3 per cent. is the true mortality rate of uncomplicated ligation of the carotid artery.

The cerebral complications following permanent closure of the common carotid are much more important. Le Fort gives them as 30 per cent., out of which 73 per cent. ended fatally; Pilz, as 32 per cent., with mortality of 56 per cent.; while Friedlander gives it as 19 per cent., out of which 68 per cent. died.

(a) *The External Carotid.*—Instead of ligation of the common carotid artery it has been frequently advocated that the ligation of the external carotid artery be whenever possible substituted. That immediate mortality rate, as compared with that of the common carotid artery is not visibly decreased, is indicated in the statistics of Lipps, in which among 130 in two, or 1.5 per cent., the cause of death was directly attributed to the ligation of the vessel. A thrombus in these two cases, as found post mortem, extended from the point of the ligation into the lumen of the common carotid artery, and had caused a cerebral embolism. Wyeth, in his statistics of sixty-seven cases of uncomplicated ligation of the external carotid artery, reports three deaths, or a rate of mortality of 4.5 per cent. But the pregnant and grave cerebral complications do not follow.

(a) *The Vagus.*—In some cases it is necessary to divide or resect the vagus. Its extensive distribution, the numerous important organs it innervates, have been thought to render division of the vagus fatal. The unilateral division and resection of the pneumogastric has been frequently successfully practiced. The hypothetical disturbances, such as increased cardiac activity, lessened and deepened respiration and dysphagia, have been clinically shown not to occur.

The only alteration of functional disturbance which is constant is the paresis of the vocal cord on the side of the division. It persists in almost all instances, although in the course of time an amelioration is not uncommon. The division of both nerves is not to be considered.

Inferior Laryngeal.—Section of the inferior causes motor paralysis of the corresponding side of the larynx, and of a portion of the esophagus. The effects *per se* are not fatal. From the paresis of the esophagus resulting from the division of the inferior laryngeal nerve, as well as from the paralysis of the epiglottis, when the superior laryngeal nerve, or the vagus above point of origin, is severed, the occurrence of the so-termed vagus phenomena has been assumed to result. It has been advised by Shou that in such instances of unilateral division of the vagus or inferior laryngeal nerve, tracheotomy be immediately performed, and the trachea be tamponed in order to prevent the aspiration pneumonia. The pneumonia, which results in such instances, has probably but a slight causal relation to the division of these nerves. Its etiological factor is the extensive operation itself, during and after which blood and secretions can readily enter the respiratory passages.

Thoracic Duct.—During resections in the antero-inferior angle of the inferior carotid triangle the cervical portion of the thoracic duct has occasionally been injured or totally severed. The vessel in this position arches over the apex of the left lung, and, according to the usual description, empties into the angle of the confluence of the left subclavian and internal jugular vein. More concise anatomical investigations have, however, revealed numerous variations in its course, position and termination. The arch which the duct forms in its course over the apex of the lung varies considerably. Henle speaks of an instance in which the arch was situated two inches above the top of the sternum, touching the thyroid gland. The numerous variations along the whole course of the duct may assist in the more rapid establishment of collateral circulation. Anastomosis between the thoracic duct and the venous circulation, other than its single, normal confluence, are known not to be unusual. These accessory communications are most frequently found near the termination of the thoracic duct where these collateral channels, from three to six in number, empty singly into both the subclavian and internal jugular vein. According to Brinton, when these accessory terminal anastomoses are present, each of the large veins receives one or more of these ducts. Collateral channels between the thoracic duct and the vena azygos major, and even the inferior vena cava, have been found. The importance of these accessory channels is evident, as their presence insures the rapid re-establishment of the collateral circulation when the main duct has been severed. Death resulting directly from such operative injuries has as yet not been reported.

ARE PATIENTS WHO ARE NOT CURED RELIEVED BY THE OPERATION?

In general, if the growth cannot be completely removed, or if there is early local recurrence, the answer is decidedly negative.

If completely removed the rate of growth is increased, the patient reduced in strength, the total suffering probably increased and the end hastened.

Death from glandular involvement is a decided gain over either that from original growth or from local recurrence.

In tongue cancer, the "horrible fetor," profuse and foul salivation, its pitiless, incessant, weary, racking, aching of the tongue, ear, face and teeth (Jacobson), is much worse than death from glandular recurrence. Likewise, in cancer of the lip the death in the unsuccessful cases is usually due to glandular involvement and constitutes a decided gain.

In cancer of the upper jaw, the great majority of the unsuccessful cases die of local recurrence, frequently within a few weeks or months. "With the return of the growth there is usually a return of the pain and distress the operation was intended to relieve." (Butlin.)

Unless curative the operation is not palliative, and unless there is a reasonable prospect of cure it should not be performed. In cancer of the tonsil, the uncured cases usually die of glandular metastases, and so produce less suffering than the original growth.

The unsuccessful lip cases often give a good measure of relief; not so in those for the thyroid gland and the branchiogenic carcinoma.

TECHNIQUE.

Preparation of the Patient.—In cancer of the mouth there is usually a large amount of infective material and debris upon the mucous membranes and the

teeth. The teeth should be put in order by a dentist, and the mouth repeatedly cleansed and disinfected before the operation. In cases in which there will be interference with feeding, there should be forced feeding prior to the operation. Rather than the usual pre-operative fasting period, a modified diet should be continued and the stomach washed out just before anesthetic. To prevent chilling during operation, I have for the past year placed the patient upon a hot-water bed, designed by the Goodrich Rubber Company, to fit the operating table.

Preliminary Tracheotomy.—Irritation, cough, tracheitis, bronchitis, bronchopneumonia, and even death, may follow simple tracheotomy. Besides, the patient is not able to clear the throat of mucus and wound discharges. On the other hand, our present means of controlling hemorrhage, the method of anesthetizing through rubber tubes passed through the nose, with tamponing the pharynx in suitable operations, removes the dangers and the difficulty for which tracheotomy is usually performed. Special circumstances may require tracheotomy, but, as a general proposition, it is no longer indicated.

Preliminary Administration of Drugs.—Hypodermatic injection of atropine to prevent inhibition of the heart is indicated in all operations in which the superior laryngeal or the vagus may be involved. Unless some general contraindication exists, morphine should also be given, so that during the deeper and more tedious part of the operation but slight, if any, general anesthetic will be necessary. The deeper parts of the neck and mouth have comparatively little sensory nerve supply. Preliminary administration of such drugs as strychnine, digitalis, brandy, etc., is not only useless, but harmful.

The Control of Hemorrhage and the Administration of the Anesthetic.—A study of the mortality tables of the best surgeons of to-day shows that a very considerable percentage of operative deaths in the larger operations are due directly to hemorrhage. Of the larger number of deaths reported as caused by shock, exhaustion and anemia, the principal factor, as Butlin has pointed out, is hemorrhage. To this must be added a very considerable number due to the entrance of blood into the pulmonary tract, causing death from toxemia or pneumonia. More hemorrhage is caused by the innumerable smaller vessels than by the larger. If all these smaller vessels are picked up as they are divided, so that the loss of blood may be kept within the limits of safety, and a clear operative field maintained, the operation is dangerously prolonged. The arterial blood supply should be controlled. This may be done by either permanent or temporary closure of the carotid artery. Permanent closure of the external carotid carries with it, on account of thrombosis and embolism, an immediate mortality rate of one to two per cent. Permanent closure of the common carotid in the cancer age of patients has an immediate operative mortality of about three per cent.—with from twenty to thirty per cent. of cerebral complications, about one-half of which terminate fatally. Experimental and clinical research has shown that the carotids may be closed during the operation with perfect safety.

The writer has temporarily closed the common and the external carotid with an instrument especially designed for that purpose, forty-three times, and has not, in a single instance, noted any unfavorable side effects. The free anastomosis necessitates in some operations a bilateral closure. This may be done, but there have been as yet too few cases for deductions. The time required for applying this instrument and closing the artery is usually from two to five minutes. The clasp should be closed just enough to approximate the vessel walls,

more than this may be harmful. This requires but little pressure. Venous hemorrhage is not by this means controlled. After the carotid is closed, the branches when severed discharge the blood they contain—amounting to a small passive hemorrhage. When the vessels have been closed, the field of operation may be kept clearer of blood by hemostat and assistants, and dissection may be more precisely and quickly done. At the close of the operation but few vessels require ligation. In all operations in the mouth excepting those in the pharynx, the following technique prevents blood from entering the trachea, secures free respiration, keeps the mouth open, the tongue well forward, simplifies the administration of the anesthetic, and removes the anesthetizer from the field of operation. This technique consists in:

(a) Placing the patient under full surgical anesthesia.

(b) Cocainize the pharynx.

(c) Pass as large a rubber tube through each nostril as it will permit, back to the level of the epiglottis, cut the tubes off as long as necessary, to remove the anesthetizer from the field of operation.

(d) Pull the tongue well forward.

(e) Firmly pack the pharynx above the epiglottis with large pieces of folded gauze. Arrange the packing so as to make pressure and counter-pressure against the soft palate, pharyngeal wall and pillars, posterior hard palate, and the base of the tongue. This creates and maintains an air chamber in the lower pharynx through which free exchange of air may take place by means of the rubber tubes between this air chamber and the outside air. The packing may be so arranged as to give a free field where desired. In removal of the tongue, this organ may be "packed" so far forward as to protrude well out of the mouth. The lower jaw is simultaneously well opened. The pressure against the base minimizes hemorrhage. Neither forceps, silk loop, nor other mechanical means for controlling the tongue are needed. In operations on the palate, neither tongue depressor, nor mouth gag is required. None of my cases have vomited. In that event the gauze may be removed in an instant. As for mucous, the atropine controls it fairly well, but the gauze packing extends over the mucous protruding area and absorbs it. The operations performed by this method have passed off with surprising ease and smoothness.

Plan of Dissection.—The dissection should be as logical and as thorough as in the operation for cancer of the breast, and should be as definitely planned. First temporarily close the common carotid artery of the neck, extend the incision upward to the angle of the jaw. From this point make lateral incisions parallel with the lower border of the jaw. Reflect the skin over the entire area of the possible glandular involvement. Palpate the field. If glands are enlarged, divide the sterno-mastoid muscle transversely. Ligate the internal jugular vein in two places and divide between. Then from below upward remove all the lymphatic bearing tissues, which amounts to a complete removal of the cervical fascia. Remove every structure lying between the integument and the deep muscular plan of the neck. Unhesitatingly remove, if necessary, the internal jugular, sterno-mastoid, vagus, external carotid, omohyoid, stylohyoid, submaxillary salivary gland, the hypoglossal nerve—in short, every structure on one side of the neck, except the internal and the common carotid arteries; fortunately, these are not usually directly invaded. In unilateral dissection there should be but two objectives; the removal of the disease and the preservation of

the blood supply of the brain. I have obtained three-year cures in extensive glandular metastases by this radical procedure. Removal of individual glands is to be condemned. Compromising the technique by trying to save structure not essential to life or comfort, is a misinterpretation of the question on a par with that of the older surgeons who sacrificed lives by trying to save a part of the breast.

Should the Neck and the Mouth Dissection be Done at the Same Operation?— This question is best determined upon the merits of each individual case. If in doubt, it would be better to remove the primary growth first, then the regional lymphatic system several weeks later. It must be remembered that secondary hemorrhage still occurs in cases in which there is infection—such as is likely to occur when the neck wound connects with that within the mouth.

After-Care.—Special nursing, sufficient nourishment, warm moist air in mouth cases, getting the older patients up almost from the first are most important.

SUMMARY.

In the past three decades there has been a continuous decrease in the operative mortality and, with the single exception of the branchiod cancers, a more notable increase in the percentage of cures has been accomplished. Especially in the last decade there has been evidence of more confidence in operations, as indicated by an increased number of cases submitted early. The supreme importance of early diagnosis and early and radical operation is becoming widely recognized. The same may be said of the so-called "precancer" stage, especially of the tongue. Except in cancer of the upper jaw, the disease is now regarded as involving the regional lymphatic system as well. The disease may be found in the lymphatic vessels as well as in the lymphatic glands. It rarely extends to other parts of the body. Physiologic and clinical evidence show that severing the thoracic duct causes but little disturbance, owing to its free anastomoses. That the effect of resection of the internal jugular vein are practically nil; that unilateral resection of the vagus does not alter the heart's action, the respiration, nor the digestion, but produces a permanent hoarseness only. That division of the superior laryngeal causes anesthesia of a part of the larynx, but pneumonia is improbable; that division of the inferior laryngeal causes paralysis of the corresponding vocal cord, but interference with respiration is not marked; that the division of the spinal accessory has but slight effect, on account of the double nerve supply of the sterno-mastoid, and the synergistic action of other muscles; that the division of the hypoglossal causes temporary interference with speech, and swallowing, but compensation occurs; that the submaxillary salivary gland may be removed without symptoms; that the removal of the sterno-mastoid is not followed by torticollis, etc., on account of the synergistic action of other muscles; that the complete removal of the lymphatic system of one side does not produce a pseudo-elephantiasis of the face and head; that permanent closure of the external carotid has an operative mortality of one to two per cent., due to thrombosis and embolism; that permanent closure of the common or internal carotid is attended by an operative mortality of about three per cent., but in the cancer period of life from twenty to thirty per cent. of cerebral complications follow, about fifty per cent. of which prove fatal; that temporary closure of the carotid by means of a special clamp, as shown in the writer's forty-three cases,

in which neither death nor cerebral complications occurred, is both efficient and safe. These physiological and clinical data lead to but two objective points in a unilateral operation for cancer of the mouth or neck, viz.: complete removal of the disease, and preservation of the blood supply of the brain. If necessary, sacrifice every other structure between the skin and the plane of the deep muscles of the neck. Loss of blood is the greatest operative difficulty and danger, and usually the cases of least shock are the cases of least hemorrhage. If hemorrhage is likely to be considerable, the common carotid should be closed during the operation. In the mouth cases the anesthetic may be administered through rubber tubes passed through the nostrils to the level of the epiglottis, with the tongue well drawn forward. The pharynx may then be packed with gauze, so as to form an air chamber in the lower pharynx, effectively prevent blood from entering the pulmonary tract. The dissection should be made on the same plan and as thoroughly as in the radical operation for cancer of the breast. The greater ease and certainty with which diagnosis may be early made in this region, the rarity of its extension beyond the glands of the neck, should enable the surgeon to obtain even better results here than in cancer of the breast. The hope of the patient lies in early diagnosis, early operation, and a logical technique.

A NEW SURGICAL TABLE.

BY BRANSFORD LEWIS, M. D., of St. Louis.

The table shown in the accompanying illustrations is designed to meet the special requirements of one working in genito-urinary or gynecological lines, either at office or hospital, as well as to answer for general surgical needs. Its adaptation to general work is apparent and need not be dwelt on. The extended posture, the ready ability to place it at various angles in extension, or to obtain the Trendelenburg position, or the possibility of causing instantaneous lowering of the head of the patient, in case of syncope or cessation of respiration, executed by the anesthetist himself, without the operator having to soil his hands by assisting; the absence of retarding or ill-working ratchets in the entire mechanism, for which are substituted clamps that work instantly; stirrups either extended or elevated (the latter furnishing fixed lithotomy position, etc.)—are all appropriate for general surgical work.

A feature that is extremely useful in office work, enabling the surgeon to examine or operate on genito-urinary patients without the necessity of removing the clothing, is the forward central drainage it gives. The trousers are simply pushed down below the drainage-pan opening; and the stream being directed forward and immediately into the drain pan, is taken care of without soiling the clothing above or below.

But the special properties, to meet which, in fact, the table was designed, are those referable to its adaptation to cystoscopic work and ureteral catheterization. It furnishes positions for this work that are as nearly comfortable for the patient and desirable for the operator as can be given.

For this purpose the patient is placed in a sitting posture, with moderate elevation of the head-rest, the legs on the crutches. The table almost balances, with the patient in this position, so that one person, without any assistance, may lower the head to any angle desired, such as is shown in Fig. 2 or 3. A feeling



FIG. 1.—The Bransford Lewis surgical table in position of extension; forward drainage, permitting of examinations, minor operations, etc., without removal of clothing.

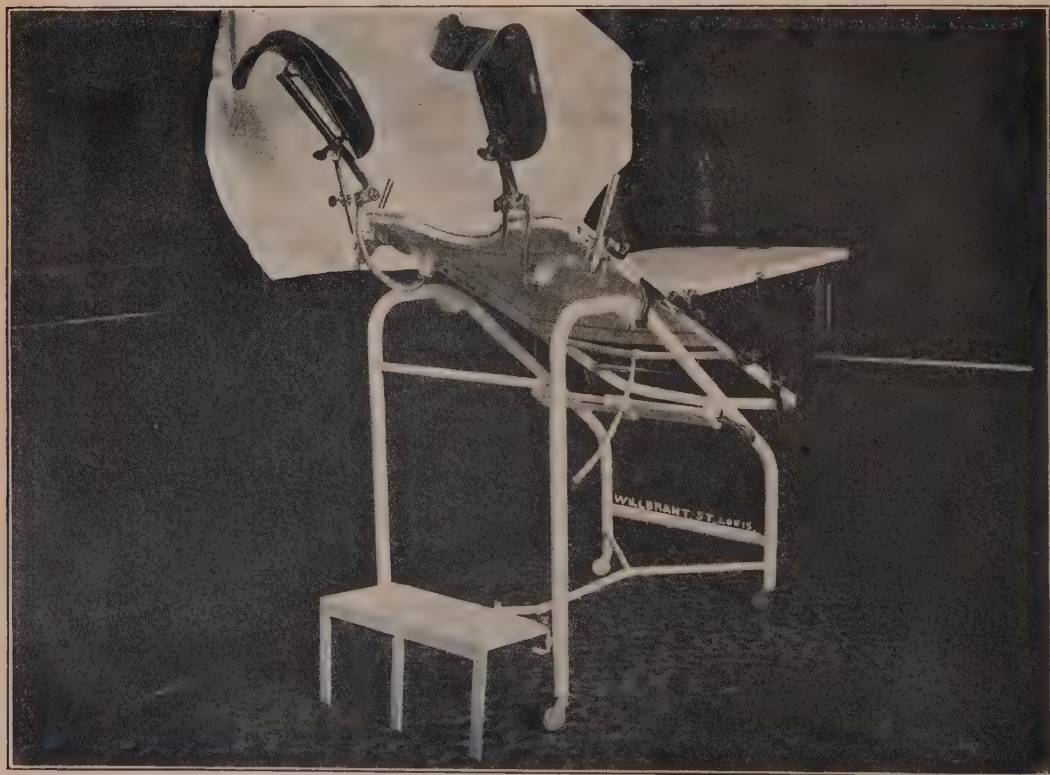


FIG. 2.—The table in position for cystoscopy or ureter-catheterism, as further shown in Fig. 3.



FIG. 3.—Table and patient in position for cystoscopy or ureter-catheterism. Pelvis elevated, legs flexed and comfortably supported by crutches, placed at any angle or height desired; hands grasping handles. Foot-stool present, for use if desired. No strain in the posture.

of security is contributed by the handles which he grasps, and these keep the hands out of the way also.

The crutches are so arranged that they adapt themselves to any length of thigh; their main joint is located directly under the hip-joint, making exact correspondence between the movements of these in abduction and adduction; and the universal hinges of the crutches keep them adapted to any angulation at that point. The cut-out at the end of the table renders the patient more accessible for perineal or for gynecological work. The head-piece slides back and forth along the table to correspond to different sized patients. A foot-stool is instantly moved into position or out by the foot of the operator.

The strong, substantial construction of the table is appreciated by the patient who is to be placed in the elevated pelvic posture.

In using my method of cystoscopy or ureteral catheterism with air inflation of the bladder (instead of fluid), this table facilitates the procedure very materially. While the head is being lowered and the pelvis raised, the body and limbs are maintained in their same relative position; and the patient being comfortable in that position, no strain is placed on the abdominal or bladder muscles, which would make resistance to the easy inflating of the bladder.

I wish to thank Mr. Willbrandt, of the Emil Willbrandt Surgical Manufacturing Company, for his skill and assistance in the construction of the table.

627 Century Building.

SPECIAL ARTICLE.

ADDRESS OF WELCOME TO PROFESSOR LORENZ.

By H. AUGUSTUS WILSON, M. D., of Philadelphia, and a Sketch,* by M. R. DINKELSPIEL, M. D., of Philadelphia.

The American people are naturally of an enthusiastic class, but the enthusiasm is seldom manifested at the expense of mature deliberation. In describing Dr. Lorenz and his skill I have endeavored as far as possible to strip the subject of all sentiment and elaboration in order that he may be considered on one hand from a purely scientific standpoint, and, on the other, from an impartial sociological point of view.

The slightest stagnation in the progress of medical science offers boundless opportunities for explosions of energy, but it ultimately requires a well-balanced and authenticated demonstration of skill or discovery to bring the medical world at the shrine of acceptance and co-operation. It was, therefore, with no little expectation, and I might say curiosity, that the amphitheatre was filled with surgeons of distinction and pre-eminence, an audience not only of international reputation as far as criticism is concerned, but one which was eagerly awaiting the practical demonstration of the long and much-heralded skill and dexterity of Prof. Lorenz.

There was undoubtedly much speculation as to his individuality, notwithstanding that the lay press had been teeming with his photographs. This speculation, however, was not satisfied by any sudden or demonstrative entrance of Dr. Lorenz. On the contrary, he must have been in the amphitheatre for a little while before he was located amidst his assistants, so unobtrusive and so inextricably blended with the others did it appear he had become, before he was applauded. The most careful scrutiny and the keenest observation failed to detect in him the slightest evidence of self-consciousness or assertion. His personality grew upon one, as it were. Over six feet in height, magnificently proportioned, rather of an Apollonean than of a Herculean type, with a beard of patriarchal proportions, and eyes combining intensity yet benevolence, with graceful posture and movements, he presented indeed a striking appearance. He responded to the tremendous applause with befitting grace and dignity, yet it could easily be observed that it was entirely unsolicited. He was welcomed in the following address by Prof. H. Augustus Wilson:

"Dupuytren announced in 1829 his conviction that congenital dislocation of the hip was not only incurable, but that even palliation was impossible. For nearly sixty years the medical profession showed its conviction of the soundness of Dupuytren's statements, and no attempt was made to do more than overcome the shortening by the use of high sole shoes or apply some form of brace.

In 1887 the American Orthopedic Association was organized. In the same year Buckminster Brown, of Boston, one of the original Fellows, reported a case that has become historical, in which he proved the curability of this condition by the long-continued use of extension in recumbency. His case was kept on his back for thirteen months with extension constantly applied. The result was restoration of function.

William Adams, of London, was at the same time devoting attention to recumbency without extension, with resulting arrest of progress, but lacking establishment of function. Schede, of Hamburg, had long relied upon mechanical support in the form of varying sorts of braces.

* Based upon observations at a clinic held at the Jefferson Medical College Hospital, Philadelphia.

In 1890 Hoffa, of Wurzburg, first directed attention to his cutting operation, and statistics rapidly accumulated showing that the formerly hopeless deformity was curable.

Lorenz, of Vienna, became interested and an advocate of the cutting operation, which he continued to perform until 1892, when he abandoned it for the bloodless method of reposition, which has since been known as the Lorenz method.

Paci, of Pisa, had tried, previous to this time, unsuccessfully, to reduce a congenital dislocation of the hip in an adult, and by some is referred to as having originated the procedure which Lorenz perfected. Lorenz clearly proved its applicability to suitable cases, and established its permanency and freedom from the mortality which followed the Hoffa cutting operation.

Abbot says there are three elements necessary for success:

'A great work undertaken, a great enthusiasm undertaking it, and a great end kept steadily in view.'

To Lorenz belongs the credit of discernment in applying the method in early childhood before the gross changes to acetabulum, head of femur and surrounding soft structures, has taken place.

He has observed that his bloodless method was unsuitable to a case that has been allowed to walk until the age of seven years, because the acetabulum would by that time have undergone permanent changes. These cases of seven years or over were only capable of permanent cure by a cutting operation, but much of the severity of that procedure would be rendered unnecessary, if the bloodless method were first efficiently practiced.

E. H. Bradford, of Boston, and Royal Whitman, of New York, have been conspicuously active workers in both the Lorenz and Hoffa methods, and every orthopedic surgeon has had occasion to successfully treat congenital dislocation of the hip, which condition was in preceding decades thought to be incurable and without application.

The varying statements as to the permanent cures have their basis in one or two features. Lorenz's 60 per cent. has been secured by his enthusiasm and skill, as well as by his applying his method very largely to children under six years. The statistics of American orthopedic surgeons of 25 per cent. of cures by the bloodless method is the result of many different operators who have often applied the method correctly to suitable cases.

The high mortality and ankylosed joints that have followed the Hoffa operation and its modifications has caused every one interested in these cases to rejoice at the opportunity which Lorenz's visit to America has afforded, to become more familiar with his selection of cases, technique and subsequent treatment. Various rumors ascribe Lorenz abandoning the Hoffa operation and advocating the bloodless method to a surgical eczema of the hands. Whether this is accurate or not matters little, for no matter what the incentive, the fact remains that the profession owes to Adolf Lorenz a deep and lasting gratitude for having originated and perfected a cure for congenital dislocation of the hip with a minimum of risk to the patient.

Medical history is full of instances of disputed credit for originality or priority of invention, notable instances of which are Harvey's discovery of the circulation of the blood and Morton's successful use of ether for anesthesia. Attempt has been made to take away from Koch, the father of bacteriology, the credit for the discovery of the bacillus of tuberculosis by the assertion of Warren that Baumgarten was the first to see the bacillus under a microscope, but acknowledging that Koch was the first to cultivate it successfully and describe it. Benjamin Jesty inoculated his wife and two children twenty-two years before Jenner is said to have discovered vaccination. That Nicolononi was undoubtedly the first to apply tendon transplantation to club-feet, but that he simply accepted the method as previously used by Duplay in a case of paralytic hand.

There are those who would have us believe that because Paci, of Pisa, resorted to the bloodless method of reposition of congenital dislocation of the hip before Lorenz described his technique the operation should be called Paci's operation, or Paci-Lorenz method. The facts, however, are that Paci was unsuccessful in his attempts to reduce a congenital dislocation in an adult, while Lorenz grasped the essential idea that to be successful the operation should be resorted to in early childhood, and that in addition to early reposition definite procedure should be employed to secure permanency. The elaboration of these essential details enabled Lorenz to be the first to successfully and permanently cure a case of congenital dislocation of the hip, and thereby secure the undisputed credit for the operation which very properly bears his name.

The Jefferson Medical College and the medical profession of Philadelphia extend a cordial greeting to Dr. Adolf Lorenz, Professor of Orthopedic Surgery in the University of Vienna."

At the conclusion of this address Dr. Lorenz's versatility became manifest. He briefly yet concisely responded, and, although a foreigner, as evidenced by the German accent, he nevertheless displayed a remarkable command of the English language, having a thorough grasp of the grammar, vocabulary and diction and a surprising command over idiomatic phrases. He was never at a loss for the right word at the right time, and in the right place.

The literature on the operative treatment of congenital dislocation of the hip has already been thoroughly reviewed in the address of Professor Wilson. It

was in the practical application of his methods that Dr. Lorenz, without a doubt, displayed the dexterity and manipulative skill with which he had been so deservedly credited. The moment he grasped the limbs of the patients it could be seen that there was no superficiality or pretense about him. The manner in which, step for step, he described the scientific data connected with his manipulations amply proved, to use a homely expression, "that he thoroughly knew what he was about." All had evidence of the reposition of the head of the femur into or against the acetabulum, and all left the amphitheatre with the feeling that they had been in the presence of a master.

It still remains for me to place on record a complication which may yet become of considerable interest, and one which Professor Lorenz himself in all his experience witnessed for the first time in this instance. I am indebted for the following notes to Dr. P. H. Moore, now resident physician at the Jefferson Medical College Hospital. The phenomena were also witnessed by Professor Wilson.

"The child had been under ether for thirty-five minutes the day previous to the day upon which she was operated upon, in readiness for Professor Lorenz, but he was too exhausted to take this, the fifth patient.

At 9:15 P. M. the right hand was observed to begin to move in an indefinite, convulsive manner, and the patient rapidly passed into a state of stupor; the eyes became fixed, pupils dilated, did not respond to light; the tongue protruded, and semi-frothlike saliva dribbled from the mouth. The face was markedly pallid, and felt cold to the touch. Breathing was somewhat slower than normal and labored. Occasionally the lower jaw moved slightly, but there was no biting of the tongue.

The pulse was not rapid, but was decidedly weak. Later it became rapid, and could not be counted owing to arm movements.

The right leg was several degrees lower in temperature than the left, and offered almost no resistance in manipulation.

In three-quarters of an hour the stupor began to lessen; respiration became more nearly normal. A slight flush came to the cheeks, the tongue retracted, and the muscles of the face showed some 'twitching movements.'

The right hand underwent convulsive movements, the head was turned violently from side to side; there were mild clonic contractions of the muscles of the back, and speech, slowly restored, became coherent.

In about an hour and three-quarters the condition was practically the same as before the attack. The child did not sleep.

At 12:30 (same night) there was a much briefer attack, showing most of the above phenomena in modified form.

Restless sleep until morning. There was no recurrence, and no resulting paralysis. The child was languid."

Professor Lorenz, in a personal communication, said (after reading the above record of the phenomena) that he had never had a case in which convulsions followed the operation, and he considered shock and trauma as the cause of this case.

INTERSTATE MEDICAL JOURNAL.

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EDITORIAL COMMENT.

REORGANIZATION OF THE MISSOURI STATE MEDICAL ASSOCIATION.

The date of the meeting of the State Medical Association has been changed from May 19-21 to April 21-23 at Excelsior Springs, in order to antedate the meeting of the American Medical Association at New Orleans on May 5-8.

The work of reorganizing the State Association is necessarily slow; nevertheless much has been accomplished and by the time the meeting takes place it is hoped that such progress will have been made as to demonstrate the wisdom of the new order of things.

The Judicial Council has been untiring in its efforts to effect an organization in each county and every member of this body has sacrificed time and money in his endeavor to further the interests of the profession in Missouri. While at this writing it is not possible to definitely state the number of county societies that have been organized, nor to estimate the number of members the state organization will enroll at its next meeting, what has been accomplished justifies the assumption that the majority of counties will be represented and the membership of the State Association increased ten-fold.

As the unit of organization is the county society, it is absolutely necessary that each county have its representative body through which membership in the State Association and the American Medical Association may be had, since it is only through this unit body that such membership is obtainable. Therefore, in

counties where there are no county societies but in which local societies exist, these local societies should make application to the Judicial Council for affiliation with the State Association, and it would further the work of organization if these local societies would reorganize and be made the county societies, and thus make uniform the source from which the State Association draws its membership. In counties destitute of any society a county organization should be effected at once and application made to the Judicial Council for affiliation.

In Missouri there are one hundred and fourteen counties and the city of St. Louis, the latter not being in a county. If each county supported a society with an average of only twenty-five members, there would be a total of nearly three thousand in the State Association—nearly one-half of the total number of physicians in the state.

As a profession we have failed to appreciate the amount of influence we can exert when any measure is contemplated looking toward the improvement of our eleemosynary institutions, the general health laws and sanitary conditions in our state, and with a poorly organized profession this influence is almost wholly lost. Aside from the satisfaction of having a well-organized state body working harmoniously in the cause of humanity, a united profession could wield an overpowering influence in all matters pertaining to the general welfare of the state and country.

STATE PHYSICIANS FOR HOLLAND.

According to the *Bulletin de Therapeutique*, the physicians of Holland are elaborating a scheme whereby the state is to take in hand the remuneration of country practitioners, thereby freeing them from the cares and anxieties arising from the non-collection of fees. The idea is to have the state levy a special tax of from one to two per cent. on the incomes of all who earn over 500 florins annually.

There would be one state physician to each 2000 inhabitants, making for Holland with its five million inhabitants, 2500 physicians.

In this manner, while medical assistance is at the disposal of everyone gratis, its cost is borne entirely by the comparatively well-to-do. If actually carried out, it would represent a long step on the way to state socialism.

MEDICAL JOURNALS.

In a recent number of the *Philadelphia Medical Journal*, Dr. James C. Johnson indulges in a bit of retrospection that cannot but interest everyone who has given any thought to the subject of medical journalism. His views are so thoroughly in accord with some that have been expressed from time to time in our columns that we would lend impetus by directing special attention to them.

We should advise both editors and readers of medical journals to peruse these well-worded thoughts carefully. Their tendency will be to inspire the editor to endeavor to eradicate some of the present-day evils, and to demonstrate to the critical reader how many of these evils he himself is responsible for.

The writer of the article has had the experience in journalism which enables him to speak with conviction and handle intelligently every phase of the subject.

The establishment of medical journals seems to have become a fad, but unlike most fads, we fear, is not to be short-lived. The pendulum continues to swing to the one extreme and shows as yet no sign of returning to a rational

balance. The results of this promiscuous and needless journalism can hardly be calculated now. As we have had occasion to say before, in a large percentage of cases their establishment is prompted by mercenary motives. Be this as it may, their pages must be filled. It matters little to the editor who the contributors are, or whence the source of their information. The consequence is that journals are filled with text-book articles (which suffer as a result of attempted transposition), or the reports of a "consecutive case" of some simple malady with a "hundred per cent. of recoveries," or mortality, as the case may be. That this encourages superficial work among physicians there can be no doubt. Unfortunately this contagion is not confined entirely to those who are superficial by nature. We think that we have noticed an inclination on the part of those from whom better things were expected, to yield to the temptation to have their names appear at the head of as many articles as possible in as many corners of the earth as possible. Whether these are simply courtesies to the editors who request contributions, or a bit of so-called "legitimate advertising," we do not know. If it is intended to meet the latter necessity (?) then we should recommend a form of newspaper advertising which may be considered just as legitimate, which yields quicker results and which is vastly more humane.

THE INTRAVENOUS INJECTION OF FORMALIN IN SEPTICEMIA.

New remedies are always interesting. If they carry with them the prospect of relief in conditions that now resist the remedies at our command, they are most welcome; if they seem potential in successfully overcoming the destructive influences of pathogenic organisms introduced into the body, they are worthy of the most exhaustive investigation and careful consideration. Hence the recent recovery of a case of septicemia following the intravenous injection of a 1-5000 solution of formalin, reported by Dr. Barrows, of New York, was widely heralded, and enthusiasts have grown to hope there has been found an effective agent for combating this condition.

We are, therefore, glad to publish elsewhere in this number thus early a report of experiments made in this direction. From this report it would seem that a 1-5000 solution of formalin is not of sufficient strength when introduced into the circulation to very materially affect the development of the streptococcus bacillus. A 1-2000 solution has been found more efficacious in prolonging the life of rabbits inoculated with streptococci, yet a timely warning should be sounded against the careless use of so active an agent as formaldehyde when introduced into the vascular system. Almost fatal results followed the intravenous injection of a 1-2500 solution in a case reported since the first case announced by Dr. Barrows. The result of further experiments in this direction will be awaited with much interest.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

The Relationship of Angina Tonsillaris to Inflammations of the Vermiform Appendix.—WEBER (*Muenchener Medicinische Wochenschrift*, December 30, 1902).—Much attention has been devoted of late to a consideration of the relationship which appendicitis bears to certain acute constitutional diseases. The etiology of a number of heretofore obscure cases has been explained in this manner. The relationship of polyarthritides and influenza to appendicitis is now generally accepted. A few cases of appendicitis following closely or accompanying tonsillitis have also been reported. The author calls attention to three cases which were so closely associated with follicular tonsillitis that he thinks there can be no doubt as to their relationship. One case occurred seven days after the disappearance of the tonsillitis; one while the acute inflammation of the upper air passages still existed; while in the third, appendicitis and the tonsillitis occurred simultaneously. In many cases the same organism has been demonstrated in the tonsil and in the appendix. As to the route which such an infection would take there can be little doubt. The author believes that the bacteria are transmitted to the appendix through the gastro-intestinal tract. The richness of the appendicular mucous membrane in lymphoid tissue renders it very susceptible to infection. Then, too, there are not infrequently small masses in the appendix which cause slight injuries to the mucous membrane. In other words, there are present the three necessary factors—pathogenic germs, a point of entrance, and a most favorable soil.

Adrian's experiments upon rabbits, though interesting, are in no way conclusive when applied to human beings. He injected streptococci into the auricular veins of rabbits, and succeeded in bringing about inflammatory processes in the appendix in which the same bacteria were found.

Oxyuris Vermicularis as a Cause of Acute Appendicitis.—REMMSTEDT (*Deutsche Medicinische Wochenschrift*, No. 51, 1902) describes a case of appendicitis in which a large number of the oxyuris vermicularis were found in the appendix. The author attributes an etiologic significance to the presence of these parasites, and does not believe with many that such cases are purely coincident. He believes with Schiller and Metschnikoff that the stool should be carefully examined in cases of appendicitis, and that the finding of these parasites have a diagnostic as well as an etiologic significance.

The Leucocytes in Appendicitis.—COSTE (*Muenchener Medicinische Wochenschrift*, No. 49, 1902) presents an exhaustive consideration of the relationship of the leucocytes in the blood to inflammations of the appendix and the significance of leucocytosis. He considers that if in an acute appendicitis the number of leucocytes remains normal or is slightly increased, the process is limited to the appendix, or there is a serous exudate and the course of the disease will be favorable. It must be remembered, however, that even in these cases a perforation may take place, and purulent peritonitis may result. Such a development is noted rather through the severity of the symptoms and not through leucocytosis.

If the number of leucocytes reaches 22,000, one can count with certainty upon an abscess. In purulent peritonitis the number of leucocytes increases providing the organism has sufficient resistance against the infection. A sudden sinking of the number of leucocytes which had been previously rapidly increasing, is an ill omen.

A Case of Spindle-Shaped Dilatation of the Esophagus.—ZINSSER (*Muenchener Medicinische Wochenschrift*, December 30, 1902) reports a case which presented for a number of years clinical symptoms of stenosis and dilatation of the esophagus. A post-mortem revealed a spindle-shaped dilatation of the esophagus and hypertrophy of the walls of the same. The cardia appeared perfectly normal and was potent. The stomach, too, seemed in no way involved. The mucous membrane of the cardia was perfectly smooth, presenting no erosions, ulcers or scars. There was no evidence whatever of a valve formation. The author can explain the stenosis which resulted in such a dilatation of the esophagus only through a cardio-spasmus.

A Case of Pancreatic Cyst of Traumatic Origin—Transitory Diabetes.—PICHLER (*Wiener Medicinische Wochenschrift*, No. 52, 1902).—A hostler who had been kicked in the left hypochondriac and epigastric regions, developed about three weeks later a rapidly growing tumor.

The growth soon occupied the left hypogastric, epigastric and a portion of the left lumbar and umbilical regions. The upper border seemed to extend anteriorly to the sixth rib, the lower to the umbilicus, and the right to the right mammillary line. It was very slightly movable upon respiration; the stomach lay in front of the upper portion; the colon passed in front of the lower portion. Fluctuation was not demonstrable. At this time no sugar could be found in the urine.

Through surgical interference about five quarts of a dark, sanguinous fluid were evacuated. This left a cavity about as large as a man's head extending up into the left hypochondrium as far as the fourth costal cartilage.

During the following month, in spite of the decided decrease in the size of the cyst, the patient lost weight rapidly. Upon examination of the urine it was found to contain a considerable amount of sugar. This gradually disappeared, however, and within a short time was entirely absent even after a diet rich in carbohydrates.

Concerning the Observation of Intestinal Movements Through the Cystoscope.—LATZKO (*Wiener Klinische Wochenschrift*, No. 51, 1902) takes exceptions to the conclusions reached by Halbins, in an article published in No. 48 of the above publication. Halbins had occasion to make a cystoscopic examination in a patient upon whom a vaginal hysterectomy had been done two years previously. He noted peristaltic waves in the wall of the bladder, which he interpreted as intestinal waves transmitted to the bladder because of adhesions between the bladder and intestines.

Latzko considers this conclusion unjustified, maintaining that he had often noted such movements in cases in which he had no reason to suspect adhesions. He thinks it due to the normal anatomical relations of the bladder and intestines.

Investigations Concerning the Extent of the Proteolytic Power of the Gastric Contents of Healthy Individuals, as Well as Those with Gastric and Intestinal Disturbances, Showing the Comparative Values of the Hammerschlog's and Mett's Methods.—SCHOELEMMER (*Archiv fuer Verdauungs-Krankheiten*, Vol. viii, Parts 3, 4, 5), in a very exhaustive consideration of the subject stated above, concludes that it is not possible to show a fixed relation between the hydrochloric acid and pepsin production. More pepsin, however, is produced in cases of superacidity,

and in cases of gastritis anacida there seems to be a certain relationship between these two factors. Lab and pepsin do not go hand-in-hand. Lab and hydrochloric acid decrease together in gastritis anacida, and carcinoma pepsin is the last ferment to yield to injurious influences.

It is important therefore to determine the quantity of pepsin, for it gives not only a hint as to treatment, but its constant variation points to serious destructive processes in the stomach.

The author prefers Mett's method for the pepsin determination, for it approaches nearest the physiological digestive processes.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

Trephining Skull for Headache.—SIEGEL (*Mittheilungen aus den Grenzgebieten der Medizin und Chirurgie*, Band X, Heft 3 and 4).—The patient had suffered with headache since her earliest recollection. The skull showed quite a decided depression at one point where a pronounced swelling appeared whenever she lay down. As all other means of cure had been tried in vain an operation was resorted to and the depressed bone removed. After the operation all of the physical signs and symptoms of disease disappeared and in a short time the patient could again take up her housework. A year and a half later the girl was still perfectly well. The author's idea is that the depression must have resulted from some injury, although there was no history of anything of the kind. At the same time he considers the swelling to be due to the escape of lymph into the diseased area. He has gathered from the literature twelve similar cases, all of which were cured by removing the depressed bone. In most instances it seems to him best to close the bone opening again with the button which has been removed. The symptoms in such cases are always referable to the depressed area.

Pulmonary Embolism After Fracture of the Thigh.—GAYET (*Archives Provinciales de Chirurgie*, Tome xi, No. 11).—A correct understanding of the principle underlying this article may enable one to explain a death which might otherwise have remained unclear, hence it is reproduced in part. A large cask of wine rolled over the individual in question and fractured his thigh. All went well till the seventeenth day after the accident, when febrile symptoms appeared without any apparent cause. Five days later the patient suddenly became asphyxiated, dying in a few minutes. The autopsy revealed a thrombus filling the iliac artery on the affected side, from which a portion was seen to have broken off, and in the pulmonary artery of the left side was caught an embolus which appeared to conform to the outlines of the iliac thrombus. Now it is clear that the fever was due to a phlebitis, and the author blames himself for not having immobilized the leg and thus prevented the separation of a part of the clot, with its fatal consequences.

The Pathology and Therapeutics of Intestinal Stenosis.—BAYER (*Wuerzburger Abhandlungen aus dem Gesamtgebiet der Praktischen Medizin*, Band ii, Heft. 6).—This is an interesting article from the practical standpoint, for though it contains little or nothing that is original, still the ripe experience of the author enables him to bring out numerous points that will be found of value. In these few pages one has a sort of small text-book, since the author takes up systematically the whole subject, even down to anus imperforatus. The remarks on the diag-

nosis of stenosis due to peritoneal adhesions are of especial value to the surgeon. He is of the opinion that recent adhesions, especially in the young, can be stretched by baths, massage, diet, and the like. Small abscesses may persist for months or years among them without being emptied. Bayer had cases in which the appendix stretched down to cover an appendix after perforation, caused stenosis of a loop of small bowel. In one of his most interesting cases a man forcibly replaced a prolapsed hemorrhoidal tumor, and in so doing set free an embolus which divided and lodged in the right pulmonary artery and the superior mesenteric artery, producing paralytic ileus, as a matter of course.

Tennis Arm.—CLADO (*La Progresse Medical*, November 1, 1902).—This modern affection is known only in the case of the male, and is experienced only by the strongest players, coming on suddenly after a particularly severe effort. The symptoms of most prominence are pain, functional impotence and swelling. The duration may be a month to a year, and the treatment consists in absolute rest for the affected part. In a prognostic way, it may be said that those who have once experienced the malady are particularly likely to a revisitation of it under the proper exciting circumstances.

Anesthesin in the Treatment of Wounds.—LENGEMANN (*Centralblatt fuer Chirurgie*, No. 22, 1902).—This author, working in the celebrated Mikulicz clinic at Breslau, puts forth some interesting ideas regarding this rather modern drug. It is a reliable local anesthetic, and at the same time without any irritative effect. The powder, when sprinkled over a granulating surface, prevents the pain usually occasioned by the use of silver nitrate. However, a sufficient time must always be allowed to elapse before the full effect of the drug can be seen. It is very useful in treating a burn; here the pain will disappear if the powder be used before a dressing is applied. The drug has a variety of uses, of which the above merely serve as examples.

Actinomycosis Hominis in America, with Report of Six Cases.—ERVING (*Bulletin of the Johns Hopkins Hospital*, November, 1902).—Here are brought out several interesting facts besides the details of the cases which were up to date unreported. This makes one hundred in American literature, of which seventy-two occurred in males. Most of those affected had handled grain and live-stock very much, so were thus exposed to the infection. Several say that they were in the habit of chewing straws, which is surely of interest. There is some uncertainty as to whether or not iodide of potassium is of benefit in connection with the surgical treatment of such cases.

A New Method of Sterilizing and Preserving Cat-Gut.—CLAUDIUS (*Deutsche Zeitschrift fuer Chirurgie*, Band lxiv, p. 489).—The most simple and altogether admirable method here described deserves to be made well known. The author's idea is to soak the gut for a week in the following solution (after which it is ready for use, and may be kept in the same receptacle): Iodine, one part; iodide of potassium, one part; water, one hundred parts. Laboratory and clinical tests have proven such material to be aseptic, while the strength remains unimpaired and the iodine does not irritate the tissues. Excess of iodine is washed out for a few moments before using, any aseptic solution serving this purpose. The gut is black in color, and possesses a consistency unlike that imparted by any other form of preparation; it is not stiff, slippery or swollen; but, best of all, knots do not slip any more than is the case with silk.

The Heredity of Synovial Ganglion.—FERE (*Revue de Chirurgie*, December, 1903).—The author commences by referring to the hereditary tendency which

has been noted in the matter of congenital dislocation as well as in many other developmental joint affections. One family has been observed by Fere which certainly was interesting from the fact that it presented a decided tendency to that "diathese kystique" which is the subject of this review. A mother who had a ganglion bore two daughters, each of whom had one or more; the first daughter bore three children, of whom two were afflicted by ganglia. The second daughter above mentioned bore four children, of whom two presented ganglia. Girls are more frequently affected than boys; and the malady is to be attributed to the fact that the subjects are born with tendon sheathes which are lacking in resistance at certain points.

Painstaking After-Treatment of Septic Operations.—KUETTNER (*Beitraege zur Klinischen Chirurgie*, Band xxxv, Heft 2).—This eminently practical article deals with the various ways in which the surgeon may save his patient the physical suffering coincident upon changing the dressings. This is greatly facilitated in cases where a rubber drain has been used instead of gauze at the operation. A tampon may be removed painlessly if it only be inserted in a Mikulicz bag instead of the usual way. Moreover, the original dressing should in every case be allowed to lie undisturbed as long as possible. Since pure carbolic acid has come into such general use in the primary treatment of septic wounds, they are found to be much less painful during the healing process. The wet dressing is far more comfortable than the dry, as will be attested by any patient. To prevent the appearance of boils and eczema around a suppurating wound, it is advised that the skin be kept smeared with some salve. The use of retractors makes it much easier to reintroduce a gauze pack, hence the patient is spared in this again. [The reviewer begs leave to make one further suggestion which has been found of great service, viz.: that every sensitive granulating surface be covered with a thin sheet of rubber before the gauze is applied. The excreta will drain out under it and be taken up, and a dressing thus put on can never stick.]

The Role Played by the Angulated Colon in Intestinal Occlusion.—WALTHER (*Bulletins et Memoires de la Societe Chirurgie de Paris*, Tome xxviii, No. 25).—Walther operated upon a patient afflicted with chronic obstruction in the fecal current, to find that a shrunken omentum which was adherent to the site of the appendix, had drawn the mesial portion of the transverse colon down so as to cause angulation with partial occlusion at the site. The patient recovered perfect health after this operation. He writes that he has commonly seen the stomach so much displaced in this way as to cause marked symptoms.

The Schleich Treatment of Wounds.—BOCKHEIMER (*Volkman's Sammlung Klinischer Vortraege*, No. 344).—In this article is expressed the very unfavorable opinion which the personnel of the Bergmann clinic seem to have formed of the pastes, etc., proposed by the above named author. The pulvis serosus has no advantage over dry gauze, and is more difficult to remove. Glutol is in no wise superior to many other salves which are far cheaper. On the other hand, glutol-serum does positive harm by holding back the excreta of an infected wound, when the same would be absorbed by a gauze bandage properly applied. This last named does not render a wound free from germs by producing formol, as the inventor has claimed.

Removal of an Upholsterer's Tack from the Right Bronchus.—BROKAW (*Annals of Surgery*, December, 1902).—It is a pleasure to chronicle, as coming from our own city, a feat which only the most advanced diagnostic acumen as well as the boldest operative technique make possible. The patient was in this instance

a girl of eight, who was brought to Dr. Brokaw almost a month after the accident had happened. He located the tack with the x-ray, and operated twice through a tracheotomy opening. The first time nothing was accomplished, but upon a second trial the tack was grasped through an endoscopic tube and withdrawn. Considerable laceration of the mucosa occurred, but the patient made an uneventful recovery.

The Recurrence of Carcinoma.—V. KAHLDEN (*Archiv (Langenbeck) fuer Klinische Chirurgie*, Band lxxviii, Heft. 2).—Of first importance are portions of the tumor which have been left behind in an incomplete operation. Then a few cancer cells can have lodged, at the time of operation, in a lymph vessel some distance from the original site, leaving a long stretch of healthy vessels between the two. Next come the possibility of inoculation and contiguity, both of which are possible. If further, the growth be multi-centric, it is easily explained how the growth will recur if one of these centers of growth be left behind. As these do not all develop at the same time, this form of growth can be termed *pleuritemporal* as well. A sort of reactive encapsulation tend to limit the rapidity of some carcinomata, a matter which may be of vast importance. Fortunately, not all cancer cells which are left behind in an operation develop further, else the success of surgery would be more limited. Again, we well know that metastatic cancer masses simply undergo degeneration without doing the slightest harm. For late recurrences, as late as five to ten years after the original operation, we have only the pleuricentric and the pleuritemporal forms of growth as an explanation.

Actinomycotic Appendicitis.—THEVENOT (*Gazette des Hopitaux*, November 18, 1902).—This article is of value as calling to mind the possibility of this form of the disease complicating the diagnostic picture. The patient under discussion was an hostler and in the habit of chewing straw and grain, hence the source of the infection. Upon the appearance of characteristic symptoms his appendix was removed, but the wound never healed while the mass in the abdomen increased. Thereupon the true nature of the infection was first suspected and a curettement made which led to a diagnosis after the microscopic examination had been made.

Acute Perityphlitis.—MOSZKOWICZ (*Mittheilungen aus den Grenzgebieten der Medizin und Chirurgie*, Band x, Heft 5).—This instructive article is a report of the last ten years' work in this field at the Rudolfinerhaus in Vienna; the methods employed and the results attained do not differ materially from those of other first-class hospitals, hence, to economize space, our review will concern itself with but a few strikingly new points. It is of undoubted value to us to know that the author has found that the collapse in these cases can be successfully combated by hot baths; two patients recovered after baths of six hours' duration (40° C.), when they had reached the cyanotic condition in which cholera victims are seen during the late stages of the disease. Another point in the after-treatment of these cases which has saved life, has been the establishment of a cecal fistula, in cases there has been persistent interference with the intestinal current.

Perforating Wound of the Abdomen, Hernia of the Pancreas and Injury of the Stomach.—FONTOYNONT (*Archives Provinciales de Chirurgie*, No. 9, 1902).—The patient was attacked by one of his companions and stabbed in the abdomen with a very long knife. When seen by the surgeon, some hours later, one of the internal organs protruded from the wound, and was plainly strangulated by the latter. He was placed upon the operating table and the wound enlarged, when, to the surprise of the operator, no intestinal perforation was to be found. The

organ above mentioned as protruding from the wound was found to be the pancreas, which was replaced. and the wound packed with gauze, whereupon the patient did very well and made a recovery which was interrupted only by the fact that stomach contents poured out of the wound when the gauze pack was removed. About three months later the individual died of tuberculosis of the lungs and the post-mortem disclosed a cut in the posterior wall of the stomach around which the peritoneum was adherent. The author has found but six cases in the literature in which the pancreas protruded from a wound.

THERAPEUTICS.

IN CHARGE OF

ALBERT E. TAUSSIG, M. D.

Mesotan—An Antirheumatic for External Use.—TH. FLORET (*Deutsche Medic. Wochenschr.*, 1902, No. 42), H. ROEDER (*Muenchener Medic. Wochenschr.*, No. 50, 1902).—The value of the external use of salicylic acid in acute articular rheumatism has long been recognized. Bourget in France and v. Ziemssen in Germany first obtained good results by means of the local use of salicylic acid ointments. In America the external use of oil of wintergreen was first recognized as superior to that of salicylic acid, and is still in great favor. Its great drawback, however, is its penetrating odor, as well as the dermatitis it often produces; the European chemists have accordingly for some time been searching for an efficient substitute. This the Elberfeld Farbenfabriken now claim to offer the medical profession in mesotan, a methoxymethylester of salicylic acid, and, therefore, closely related to oil of wintergreen, of which methylsalicylat forms over ninety per cent. Mesotan is a clear, yellowish, oily liquid with a faint aromatic odor. It is easily miscible with alcohol, ether, chloroform and oils, but nearly insoluble in water. It is readily absorbed through the skin, and is thereupon split up by the alkaline sera of the body. Soon after its application the salicylic reaction may be obtained in the urine.

According to Floret, the external use of mesotan in rheumatic joint or muscle affections is so promptly and certainly curative, that it may well be used as a diagnostic measure when the rheumatic nature of such an affection seems doubtful. Its action is most striking in acute muscular rheumatism, in which a single application often suffices for a cure. In acute articular rheumatism, even in severe multiple affections with high fever, the duration of the attack is greatly shortened and the pain almost instantly relieved. It has been found useful also in rheumatic anginas, pleurisy, etc., but is quite inactive in traumatic or gonorrheal joint affections or in neuralgias.

The drug is best used mixed with an equal quantity of olive oil. A small quantity of this mixture is rubbed into the affected joint; less than a teaspoonful usually suffices. One to three applications, according to the severity of the attack, are made daily; the joints do not need to be covered with a dressing, as when using oil of wintergreen.

Roeder is particularly enthusiastic regarding the efficacy of mesotan in subacute and chronic arthritis. He reports a number of cases, of which the following will serve as specimens:

CASE 22.—Painful swelling of the right great toe for four months. Skin reddened over the affected joint, walking difficult. A single application was followed by a marked improvement that fairly astounded the patient.

CASE 24.—Treated for eight weeks as gout. After a course of aspirin 3j daily, patient was just able to walk with the aid of a cane. All the joints of

both feet were swollen and painful, the skin over them reddened. After a single application of mesotan he was able to walk with comparative comfort; in eight days he was well.

Cases of true arthritis deformans showed little or no improvement under the influence of mesotan.

The above results seem too good to be true, and it will be safe to maintain a somewhat skeptical attitude towards them. Nevertheless, the drug clearly merits a trial.

Ergotin in Pneumonia.—SCHOUILL (*Journ. des Pract.*, 1902, No. 36).—Schouill in Tunis reports his results with ergotin in pneumonia. As soon as the diagnosis is made he prescribes:

R	Ergotini.....	1.5
	Aque.....	170.0

and orders one tablespoonful of this solution given every two hours. His results have been so uniformly good that he usually finds no other medication necessary,

In this country the administration of ergotin in pneumonia has been customary for many years. Wells (of New York) maintains that by this means pneumonia may be aborted in half the cases. Many other clinicians have found that defervescence occurs sooner under the influence of ergotin than would otherwise be the case. As early as 1891 Fiessenger reported fifty cases of pneumonia treated with ergotin, with strikingly good results.

The Olive Oil Treatment of Gastric Ulcer.—WALKO (*Centralbl. f. Inn. Med.*, 1902, No. 45).—Olive oil, as is well known, when taken into the stomach diminishes the secretion of hydrochloric acid, and has been found useful in cases of hyperacidity. Walko strongly advocates its use in gastric ulcer. The patients are put to bed, are fed per rectum, but are given olive oil by mouth three times daily. The initial dose is a tablespoonful, which, however, if the patient tolerates the oil, is gradually increased to three tablespoonfuls. After swallowing the oil the mouth is rinsed out with some well tasting solution. Where its administration gives rise to much nausea, the oil may be given through the stomach-tube. In such case, three to seven ounces are introduced in the form of a thorough emulsion. After the more severe symptoms of ulcer have disappeared, Walko carefully and gradually returns to feeding by the mouth, but for another two weeks also continues the administration of the oil. According to his view, gastric ulcer heals decidedly more quickly under this regime than under any other.

Another "Cure for Morphinism."—B. FISCHER and B. WAGNER (*Muench. Med. Wochenschr.*, 1902, No. 57).—In July of last year one of the above demonstrated, by means of an analysis, that the medicament "anti-morphin," warranted to cure the morphine habit, and sold at an extravagant price, consisted chiefly of morphine itself.

They now publish the results of their examination of "nicolicin," asserted to have the same therapeutic action. It is a clear amber liquid, selling at about the rate of one dollar per ounce. On the label is what purports to be the formula, consisting of twelve ingredients, ranging from tr. colombo to sherry wine. An analysis, however, the procedure of which is described in some detail, proved that the fluid contained three per cent. of morphine. It required only the addition of a little ammonia to the medicament to produce a profuse precipitate of beautiful morphine crystals. It seemed worth while to relate the result of this analysis in these columns, as it is not impossible that the much-advertised preparation may find its way across the Atlantic.

A New Method of Treating Erysipelas.—S. TREGUBOW (*Deutsche Med. Wochenschr.*, 1902, No. 27).—The writer has had good results in the treatment of erysipelas, by subjecting the affected area to a burn of the first degree. He accomplishes this by setting fire to a bit of absorbent cotton soaked in alcohol, and holding the burning mass one centimeter from the skin. This treatment is repeated several times daily for two days, and is said distinctly to shorten the course of the disease.

Yeast as a Therapeutic Agent.—H. PASCHKIS (*Wiener Klin. Wochenschr.*, 1902, No. 31).—The writer is convinced that both brewer's yeast, as well as the ordinary compressed yeast, are valuable agents in the treatment of furunculosis, acne and severe folliculitis. Although not a specific in the sense in which mercury is a specific for syphilis or quinine for malaria, yeast is still a therapeutic agent of considerable certainty and rapidity of action. No untoward results of any significance have ever followed its administration. It is given in doses of one-half to one teaspoonful in carbonated water, beer or milk.

[Yeast has for some time found a rather wide-spread use in this country, especially for diabetes. Of late a considerable improvement in its manufacture for medicinal purposes has been effected in Germany. It seems that the active agent is the ferment in the yeast cell: the living yeast cell as such only detracts from the activity of the drug. Moreover, the large amount of water present even in compressed yeast adds unnecessarily to its bulk as a drug. Drying the yeast in vacuo takes out most of the water, but does not kill the cells; drying it at a high temperature does both, but also (at least in part) destroys the ferment. The new process consists in treating the yeast with acetone and then driving off the latter. The resulting so-called acetone yeast is a light, dry powder, free from living yeast-cells, and, as regards its fermentative power, very much stronger than compressed yeast. If there is anything in yeast medication, this form would seem to promise more than any other. It has not yet been put on the American market.]

Rodagen.—Some months ago the attempts made in Germany to treat exophthalmic goitre by means of the milk of thyroidectomized goats were discussed in this department of the INTERSTATE MEDICAL JOURNAL at some length. What purports to be the active principle of such milk has recently been isolated and put upon the market under the name "rodagen." It is said to keep indefinitely. The dose is 5-10 g. daily.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

Technic and Indications of the Vaginal Cesarean Section.—E. BUMM (*Centralbl. f. Gynaek.*, 1902, No. 52).—The author performs this operation in the following manner, which is slightly modified from the operation originally invented by Duehrssen: Cervix is pulled down by means of two volsella. Median incision, about 5-7 cm. long, reaching from the anterior fornix to the anterior lip of the cervix, is made. Bladder is separated from cervix. Now the cervix is split in the median line as high as the bladder is pushed off. Both edges of the upper end of incision are caught, like in vaginal morcellation of the uterus. In this way a higher point of the lower uterine segment is brought into view. Bladder is pushed further up, and median incision continued into the substance of the anterior uterine wall. This maneuver is repeated until the uterus is split for

about 8 to 12 cm. without opening the peritoneal cavity. Such an incision permits introducing the hand, performing version and extracting the child. Two layers of interrupted catgut sutures close the incision of the uterine and vaginal walls. Hemorrhage is comparatively slight if the bladder is pushed off the uterus within the right layer and the uterus is continually pulled down well into the vagina. The author performed this operation thirteen times. The time consumed from the first incision until the extraction of the fetus was effected, was between five and ten minutes, in several instances but four minutes. The closure of the wounds took about ten minutes. The writer dissuades forcible expression of the placenta. In a case in which a child of 3,250 grams was extracted the length of the uterine incision was but 7 cm. Of these thirteen operated cases, one ended fatally. It was an eclamptic patient brought to the clinic in deep coma. She died in another eclamptic seizure.

While the main indication for this operation at present is carcinoma of the cervix, the author hopes that it will soon take its proper place in the treatment of eclampsia.

Sectio Cesarea Vaginalis in Eighth Month of Pregnancy.—KALLMORGEN (*Centr. fuer Gyn.*, 1902, No. 48).—The writer performed this operation successfully in a patient, thirty-two years old, suffering from a carcinoma of the anterior lip of the cervix. First the large ulcerated mass was removed with the curette and the wound burned out with the paquelin; then the anterior wall of the uterus was split, the bladder being pushed back, and twins extracted. The operation was concluded by extirpation of the uterus per vaginam. The babies died soon afterward; the mother made an uninterrupted recovery.

The writer advises to postpone ligating the uterine arteries until the child has been extracted, because the reverse procedure considerably endangers the life of the fetus.

The Influence of Variola on Pregnancy.—H. M. BRASSART (*L'Echo Medical du Nord.*; rev. *Jl of Obstetr. of Brit. Emp.*, January, 1903).—The writer observed twenty-nine cases of variola complicated by pregnancy. Of these twenty-nine patients, one suffered from the varioloid form, and the pregnancy continued its natural course. The statistics quoted show that this is the usual event. Nineteen suffered from the discrete variety; of these, eleven recovered without symptoms of abortion; in one, abortion threatened, but did not take place. Four were delivered at full term. These patients all recovered, but one of the children developed variola on the eighth day and died. In the remaining three cases abortion occurred, one of them dying of pyemia one month after the expulsion of the fetus. The author concludes that in discrete small-pox the prognosis is not materially affected by pregnancy, but that abortion is to be regarded as a grave accident. Of confluent cases there were three: one recovered, the pregnancy being uninterrupted; two died. In hemorrhagic small-pox abortion and death occur almost without exception. Six of the cases presented this form. In each of them abortion took place, and the termination was fatal. Pregnancy does not seem to predispose to the infection or the development of a more severe form of variola. Abortion darkens the prognosis, and makes the patient more liable to septic infection during the puerperium, particularly if abortion occurs during the stage of suppuration. Abortion may transform a mild case of variola into a rapidly fatal hemorrhagic form.

On the Post-operative Retention of Urine.—FRED TAUSSIG (*Muenchn. Medic. Wochens.*, 1902, No. 40).—The writer's conclusions are based upon a study of 282 gynecological operations. While after vaginal hysterectomy retention of urine occurred in 2 per cent., and after abdominal hysterectomy in 3.4 per cent.,

the radical extirpation of the cancerous uterus after the method of Wertheim led to retention for a period of more than six days in 64 per cent. In this operation the regional lymph glands and both parametria are thoroughly eradicated with the uterus and its appendages. Beyond doubt, the extirpation of the parametria produces considerable disturbance in the innervation of the bladder on account of the removal of a great number of ganglions of the bladder. The retention in its turn is the predisposing factor in the development of the cystitis, which is an almost typical occurrence in the Wertheim operation for cancer of the uterus. The infection is either carried into the bladder by means of the catheter, even if all precautions are taken, or is brought about by transgression of bacteria from the intestines directly through the bladder wall. The writer tried to avoid retention by the use of the faradic current in the bladder and dilatation of the urethra. The results were not satisfactory. In the treatment of the severe type of cystitis the best results were obtained by irrigation of the bladder with solutions of different silver preparations. The prognosis of this post-operative cystitis is, however, favorable, slight inflammations as a rule subsiding within one or two weeks, the more severe forms within three or four weeks.

A Study of the So-called Disinfecting Soaps, with Special Consideration of the Creolin-Soaps.—TONZIG (*Wien. Klin. Rundschau*, 1902, Nos. 7 and 8).—Nyland, Curzio and Serafini have found that the disinfecting property of soap is reduced by the addition of carbolic acid or bichloride of mercury. The same fact has now been established for the soaplike disinfectants, lysol and creolin. Based upon careful investigations, Tonzig concludes that all alkaline soaps possess disinfectant properties, their efficacy being the greater the less water they contain. If disinfectants are added, even the soaplike lysol and creolin, their action is impaired. Such mixtures have less disinfecting power than either of the components *per se*.

PEDIATRICS.

IN CHARGE OF

ALFRED FRIEDLANDER, M. D.

Cerebro-Spinal Fever.—GRIFFITH (*Journal American Medical Association*, January 17, 1903) reports illustrative cases of various types of cerebro-spinal fever, using this term instead of cerebro-spinal meningitis to emphasize the fact that the disease is a specific infectious one, occurring usually in epidemics, and having a certain definite though varying group of symptoms. He does not consider it as certain that the affection differs in any way from cerebro-spinal meningitis not of an epidemic nature. He recognizes the following forms:

(1) *Ordinary.*—Prodromes absent or indefinite. Attack begins with headache, vomiting, fever, and very often convulsions. Very severe stiffness and pain in neck and back develop. Headache, photophobia and other evidences of meningitis marked. Marked flexion of arms and legs. Decided general hyperesthesia. Delirium common. Bowels constipated, abdomen retracted. Herpes is frequently seen and petechiæ may develop.

(2) *Malignant Form.*—Disease begins with extreme suddenness, and symptoms appear at once in most intense way. Collapse with coma common, general convulsions may supervene. Death occurs in a few hours.

(3) *Mild Form.*—Patient may be so little ill that he hardly needs to go to bed. There is severe headache, nausea, less often vomiting, and little or no fever. The neck may be slightly stiff. The diagnosis is almost impossible in sporadic cases.

(4) *Abortive Form*.—Begins as the ordinary form, but recovery takes place in two or three days.

(5) *Intermittent Form*.—This exhibits intermissions in the symptoms, which suggest malaria, occurring without definite regularity.

(6) *Chronic Form*.—These cases may drag on for weeks. There is vomiting, irregular fever, temporary improvement followed by relapses, and progressive and extreme emaciation.

Septic Endocarditis.—ADAMS (*Archives of Pediatrics*, December, 1902) has collected all reported cases of septic endocarditis occurring under fourteen years of age. They number forty-seven. Of these, four, including the one now reported in detail by Adams, terminated in recovery.

It would thus appear that septic endocarditis is comparatively rare in childhood. It was formerly held that the two forms of acute endocarditis, simple and infective (or septic), were absolutely distinct, but the modern trend of opinion inclines to the view that the two conditions differ in degree but not in kind. While micro-organisms are almost always found in the vegetations in the valves in infective endocarditis, they are frequently found in the so-called simple variety; indeed, the same species of bacteria may be found in both. The germs most frequently found are the staphylococcus, the streptococcus and the pneumococcus.

The following types are recognized: (a) primary (rare), (b) as a complication of septic disease, (c) as a complication of pneumonia or meningitis, (d) as a mixed infection due to septic organisms secondary to the acute infectious fevers or secondary to rheumatic endocarditis or sclerotic condition of the valves.

Typhoid Fever and Enteritis in the Nursling.—NOBECOURT (*Rev. Mens. des Mal. de l'Enf.*, January, 1903) has collected from the literature 1,826 cases of typhoid occurring under the age of fifteen. Of these, 33 (1.8 per cent.) occurred under two years of age. The prognosis of typhoid in very early life he considers grave, because of the liability of complicating entero-colitis. He reports in detail a fatal case, where there was at first marked improvement until the secondary enteritis, as shown by the general symptoms, and by the very abundant green stools, set in. In his opinion, this complication of a distinct secondary enteritis makes the prognosis so grave, because of the great difficulty (almost impossibility) of adequately nourishing the infant. In the case reported, no nourishment could be tolerated. He believes that the high mortality of typhoid in very early life, which he places at almost 50 per cent., is thus to be explained.

[At the last meeting of the American Medical Association, a case of typhoid in an infant of six months was reported. In the discussion which followed (see *Journal American Medical Association*, January 24, 1903), J. P. C. Griffith referred to the statistics obtained by Ostheimer and himself recently with reference to this subject. They found 418 cases of typhoid occurring in children of two and one-half years and under. One hundred and eighty cases occurred in the first year of life. Since the introduction of the Widal test, it has been demonstrated that typhoid is not as rare in very early life as had previously been supposed.—ED.]

Infantile Scurvy and Sterilized Milk.—NETTER (*Rev. Mens. des Mal. de l'Enf.*, December, 1902) concludes that

(1) Infantile scurvy is an affection distinct from rickets. The two conditions may coincide but they are due to different causes, and are not amenable to the same treatment.

(2) The disease not infrequently is due solely to the exclusive use of sterilized milk.

(3) The chances for the production of scurvy are greater the higher the

temperature to which the milk is heated, and the longer the milk is subjected to such temperature. Pasteurization is thus less apt to produce scurvy than sterilization. Reheating of milk already pasteurized to the boiling point is thus to be avoided.

(4) Fresh cow's milk contains a notable proportion of citric acid (.1 per cent.) in the form of the neutral amorphous citrate of calcium. Under the influence of heat this citrate is changed more or less to the crystalline form, which, being more insoluble, is precipitated. The antiscorbutic power of citric acid is well known, and the antiscorbutic power of fresh milk is probably largely or wholly due to the citrates. Sterilization of the milk, which reduces the citrate so largely, takes from the milk its antiscorbutic power.

(5) These facts should be borne in mind in the cases of children nourished on sterilized milk, particularly if they show signs of nutritional disturbance. The substitution of raw milk, the addition of fruit juices may in such cases prevent the development of scurvy.

Enlargement of Peripheral Lymph Glands in Infancy.—BAER (*Jahrbuch fuer Kinderheilk.*, December, 1902) examined 350 infants, all ambulatory cases, with reference to this point.

Without exception some of the lymph glands were palpable in every case, and as a result he questions the propriety of speaking of "enlarged glands" whenever they are palpable. It has been noted that as a result of gastro-enteric disease the lymph glands are often enlarged. The author found many cases in which an antecedent disease of this sort could be excluded where the cervical, axillary, inguinal glands were enlarged. In cases of severe gastro-enteric disease the inguinal glands were, however, almost always enlarged.

Cases of rickets, and of hereditary syphilis, showed surprisingly little enlargement. Many authors have noted the fact that the adenitis of hereditary lues is not nearly as marked as that resulting from the acquired form in adult life.

While it is true that localized skin lesions may produce adenitis of the corresponding region, the author found that this was by no means constant, even in chronic aggravated cases.

In order to test the question still further, B. examined twenty-five newly born infants ranging in age from ten hours to five days. In all of these infants the axillary glands were palpable, sometimes markedly enlarged, and in some cases other glands (cervical, inguinal) were palpable.

B. concludes that while a cause for enlargement of peripheral lymph glands in infancy can often be found, in many cases none can be demonstrated, and he therefore believes that such enlargement need not necessarily be pathological, or presuppose the existence of an antecedent disease.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

On Epilepsy.—BIRO' (*Deutsche Zeitschr. fuer Nervenheilk.*, Vol. 23, 1902, Nos. 1 and 2).—This article attempts to sum up the knowledge that we have on epilepsy, based upon a careful study of three hundred and six cases of this disease, all of which the author has had under his personal care for nine years. For this reason alone the conclusions as set forth are worthy of some consideration. The material is treated under the following six divisions: 1. Etiology, especially

the role which psychical and physical injuries play. Reflex epilepsy. The relation of epilepsy to infectious diseases, to diseases of metabolism, alcoholism and heredity. 2. The immediate prodromata of the disease and their relation to the kind and severity of the attack. 3. The relation of different symptoms to each other, especially that of bladder disturbance and tongue biting to other phenomena. 4. The condition of consciousness during the attack, and the state of the pupils. 5. Some unusual post-epileptic phenomena which are usually considered as *epilepsia procursiva* (six cases). 6. The psychical condition of the patients. Statistical: The conclusions here reached in regard to the statistics of epilepsy gain in importance when it is noted that the material here under consideration consists of a greater number of cases than any other hitherto reported, with the exception of Hasse, whose material consisted of nine hundred and ninety-five cases. The proportion of men to women was 55 per cent. in favor of men, while 60 per cent. were in the first twenty years of life. Etiology: In spite of the great number of cases of epilepsy observed, its etiology is still unknown. It seems altogether probable that many factors are at work to produce the disease. The sum of them cause in the main one clinical manifestation, but no unified etiology. Jacksonian epilepsy is commonly separated into a class by itself from the standpoint of etiology by most writers, but even here only a relatively small proportion of cases can be given a direct traumatic origin, 40 per cent. in this study. Psychical shock is an important factor, as well as the repetition of seemingly slight injuries to the head and nervous system. Alcohol and syphilis have a certain importance in the causation of epilepsy, but it is probable that both have been given too important a place as causative factors. Alcohol might be regarded as a favoring element, but not of sufficient moment to establish alcoholic epilepsy as a separate type of the disease, as has been suggested by some writers. The old theory, that children born from a coitus, in which one or both parents were intoxicated, is still disputed, with the tendency toward skepticism. Alcoholism in the parents is to be regarded as an evidence of a certain neuropathic tendency which may be transmitted to the offspring. The most certain of all etiological elements is that of heredity, the importance of which, however, has been likewise exaggerated by many authors. The percentage varies very widely; Gower's 35 per cent., Tissot's 9 per cent., Leuret and Delasiauve 10 per cent., Berger 32 per cent. Six per cent. of this series shows a direct heredity, and 16 per cent. when all other hereditary data were taken into consideration. If to this is added alcoholism, the percentage is increased to 34 per cent. Symptomatology: An aura was found in 28 per cent. of the cases. This low percentage is accounted for by the fact that the patients here studied were, as a rule, of a low grade of intelligence, and slight auras might easily be overlooked by them. It is noted that the severest attacks are frequently unaccompanied by an aura, whereas the slightest attacks either have them, or the aura itself forms the attack. An aura is not necessarily the precursor of the attack; in only one-fifth of the cases did an attack always follow the aura. Attacks of petit mal were found in only 3 per cent. of the cases. Consciousness may be retained and still the attack be one of true epilepsy. There is as yet considerable difference in opinion in regard to the state of the pupils; Steffen asserts that during the attack the pupils may react normally, and Karplus and Westphal have observed cases of hysteria in which the pupils did not react to light. Biro has not been able to confirm the above observation, but believes that a reactionless pupil is a strong proof of the presence of epilepsy, of course in combination with other symptoms. The lack of stability in the size of the pupils during the attack is probably due to the fact that the iris muscle takes part in the general clonic convulsion. Vomiting during an attack occurred in 2 per cent. of the cases, so that it cannot be said to speak against the diagnosis of epilepsy. However, the frequent occurrence of vomiting should always suggest the possibility of an organic lesion, especially of Jacksonian epilepsy, where vomiting occurs three times as frequently as in the

idiopathic variety. Biting of the tongue occurred in 14 per cent. of the cases, and bore no relation to the severity of the attack. In the very lightest form of attack the tongue was frequently most severely bitten. In respect to the mental state of epilepsy, the author believes that in the majority of cases, during the free interval, little deviation from the normal can be noticed; in other cases, however, a sort of mental torpor, dullness in expression and features and slowness in mental action can be observed. Althaus believes that 64.4 per cent. of all epileptics are mentally affected; Biro found only 14 per cent. of his cases with distinct mental symptoms, more than half of whom showed a weakness in memory. Diagnosis: The most important single factor which must always arouse the suspicion of the presence of epilepsy is the frequent occurrence of periods of unconsciousness of short duration. Without this, in the great majority of cases at least, and without their periodic occurrence, the diagnosis of epilepsy is not very likely. All the other factors which characterize epilepsy are worthy of notice, especially if the attack itself cannot be observed, and when such an attack of unconsciousness can be definitely stated not to be a fainting attack. When such an attack occurs in an individual who, physically, is perfectly normal, and who shows no evidence of disease which might cause attacks of faintness, and when they do not occur after physical or mental exhaustion, but in a state of perfect health and under the most varied circumstances, then there must be always a strong suspicion that they are due to epilepsy. When the physician is present during an attack, the condition of the pupils, involuntary micturition (40 per cent. of all cases), biting of the tongue, are important evidences of epilepsy. It must be remembered that the attacks of vertigo which occur in arterial sclerosis, and in certain senile conditions, may be accompanied by reactionless pupils. From a differential diagnostic point of view are to be considered convulsions depending upon organic lesions, tumor gumma, pachymeningitis, progressive paralysis, brain abscess, multiple sclerosis, poisoning and hysteria. Pathology: There is little that is positively known. In the majority of cases no abnormality in the nervous system has been found. From this negative finding arose the theory of the chemical and trophic nature of the disease. The occurrence of epilepsy after infectious diseases, such as scarlet fever, typhoid fever, measles, whooping-cough, etc., lead to the theory of the toxic origin of the disease, caused by the presence of bacteria. This view is held by Marie. In some cases changes have been found in the brain and cord, but there is so much doubt in regard to their nature, whether primary or secondary, that no reliance can be placed upon them. Treatment: Everything which tends to calm the nervous system is to be recommended, while the contrary is to be avoided. In cases without a definite etiology, and for that reason of little importance, where the attacks occur not oftener than once in two months, hygienic and dietetic measures suffice to control the attacks. Surgical interference should be advised only in recent cases, where the origin of the epilepsy is found to be due to a cortical lesion limited in extent. Bromide is the only reliable drug. The author uses a mixture of potassium bromide 3 gr., sodium bromide 1.5 gr., ammonium bromide, 1.5 gr. per day. The danger of bromidism is very slight. When the ordinary bromide treatment is not productive of good results, the opium-bromide treatment of Fleesig can be tried. The author has experimented some with the salt starvation method of Toulouse and Richet with some measure of success.

The Parasyphilitic Affections. The Curability of Tabes and General Paralysis by Intense Mercurial Treatment.—LEREDDE. Translated by M. Ostheimer, M. D. (*Phila. Med. Jour.*, January 10, 1903).—This paper, which has attracted some attention and a great deal of criticism, begins in the following way: "After having cured a case of tabes with mercurial treatment and after thorough researches upon the parasyphilitic affections and upon cases of recovery from tabes and general paralysis, I have become absolutely convinced that, in syphilitic

patients, these diseases are not only syphilitic in origin, but can also be cured by mercurial treatment, if the mercury be pushed to very high doses." Basing his theory of treatment on the assumptions, first, that tabes and general paralysis are caused by syphilis, second, that the symptoms are due to syphilitic lesions as such, and not to parasymphilitic processes, Leredde gives his large doses of mercury. Only one case is reported in this paper, that of a tabes of exceptionally rapid development, to whom was given hypodermically 1 cgm. of mercuric cyanide, followed by injections of 10 cgm. of calomel, the latter being given weekly. The symptoms have disappeared, and have shown no tendency to recur in two years. It is needless to say that this account is absolutely unconvincing. The article however is worth abstracting, in order to give the views of a noted syphilographer upon this question.

On Amaurotic Family Idiocy.—B. SACHS (*Jour. Nerv. and Ment. Dis.*, January, 1903).—Anything that Sachs writes on this subject is worthy of attention because he is to be regarded as the leading authority on the disease which bears his name. In this paper the clinical history of a case together with the findings of the post-mortem examination are given. Since Sachs's original paper, which described the disease and differentiated it clinically from some of the other degenerative diseases of infancy, many cases have been reported, so that Falkenheim, writing in 1901, has been able to critically analyze sixty-four cases. Clinically the disease presents the following characteristics: It is generally found in the offspring of Hebrew parents and is distinctly familial in type. Gradually developing blindness, weakness, convulsions, mental retardation, typical changes in the macula lutea, contractures, emaciation, and death in one or two years complete the picture. Microscopic study of the brain cortex in this case corresponds in results with that obtained in the author's first case, published in 1887. Briefly, in amaurotic family idiocy the entire central grey matter is the seat of an intense degeneration. It is to be noted that Sachs does not wish to establish this clinical type as an entirely distinct disease, but insists that this family disease represents a distinct and easily recognizable clinical entity. Somewhat similar nerve changes are found in conditions more or less closely allied to the amaurotic form of family idiocy.

Myasthenia Gravis, with the Appearance of Foci of Cellular Infiltration in the Muscles.—LINK (*Deutsche Zeitsch. fuer Nervheilk.*, Vol. 23, Nos. 1 and 2, 1903).—The interest which this disease arouses grows with each addition to our knowledge of it, particularly if such an addition seems to throw some light on its pathology, which has hitherto remained very obscure. Weigert and Goldflam have each found peculiar cellular infiltrations in the muscles. The former found, in addition to this, a malignant tumor of the thymus. The nervous system in both cases was found to be normal. Link is enabled to add another case with positive changes in the muscles.

Case.—Butcher, age forty-three years, with typical myasthenic symptoms, which began with ptosis, double vision, disturbances in the action of the eye muscles, dysphagia, abnormal fatigue, parietic weakness of the whole of the musculature of the body, myasthenic electrical reaction in the muscles, together with a normal condition of the other organs of the body. There was no atrophy. The unusual feature of the case was its rapid progress, scarcely six months elapsing between the first appearance of the eye symptoms and the death of the patient. At the autopsy, an absolutely normal central nervous system was found and a persistent thymus which, during life, could be demonstrated by percussion over the sternum. In both internal recti muscles, in the right external rectus, in both supinator longi, deltoid, tibialis anticus, which macroscopically appeared normal, were found foci of cell infiltrations. This finding is similar to that of Weigert and Goldflam, but in this case they cannot be regarded as metastasis of malignant growth in the persistent thymus gland, as the gland here was found to be perfectly normal.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. JOHNSON, M. D.

The Pathogenesis and Pathological Anatomy of Enlarged Prostate.—CRANDON (*Ann. Surg.*, December, 1902).—From an examination of thirty-seven prostates, twelve enlarged, twenty-four normal, and one small, the author discusses the bladder-wall in vesical insufficiency, the structure gross and fine, and the cause of enlarged prostate.

He says that the underlying cause of the usual form of prostatic enlargement and of certain forms of prostatic atrophy is a slow formation of new connective tissue, due to infection, or to infection aggravating a senile degenerative process. That the gonococcus is, probably, most often the specific infection because of its great frequency, because other inflammatory causes are not common in the parts in question, and because a great similarity exists between the histology of gonorrheal processes and those seen in these senile prostates.

Neoplasms, fibromata, and adenomata occur, but may be called rare.

Landmarks in the Ureter.—ROBINSON (*Ann. Surg.*, December, 1902).—In an extensively illustrative article the author says that the ureter is not a uniform tube, but has definite isthmuses, or sphincters, with corresponding ureteral dilatations, reservoirs or spindles. It is an independent organ which conducts urine from the kidney to the bladder by rhythmical waves, regardless of altitude or gravity.

Contribution to the Treatment of Affections of the Testicles and Their Adnexa.—ZABLUDOWSKI (*Ann. des Mal. des Org. Urin.*, November 15, 1902).—This article, which also appears in the *Centralblatt fuer die Krank. der Harn-und Sex-Org.*, deals with the treatment of impotence by massage, which consists of the following steps: Constriction by a rubber band for fifteen to thirty minutes, about the root of the penis, including the testicles; milking of the spermatic cords; torsion of the spermatic cords; expression of the testicles; rubbing, tapping, kneading of the testicles and the adjacent muscles, anteriorly and posteriorly.

The treatment is indicated in chronic orchitis, epididymitis, functional derangements, atrophy, nervous and sensitive disorders, anesthesia, hyperesthesia, paresthesia, etc., and pathological secretions. It acts not only in a definite curative way, but also makes profound mental impression.

A Study of the Indication for Nephropexy.—GOELET (*Med. Rec.*, December 20, 1902).—The indication for nephropexy is prolapse of the kidney to the third degree, that is, when its upper pole is palpable beneath the last rib.

This stand is taken because when in this position the organ cannot be properly supported by any kind of bandage or corset, and because of the symptoms of inconvenience it produces; the influence it may exert in producing or maintaining disease of the female pelvic organs by obstructing the return circulation from them, and its influence in causing disease of the kidney itself.

Because the inconveniences that prolapsed kidney produces are not life-taking, it is no reason why the sufferings of the patient should not be relieved, nor that we should wait until serious disease attacks the kidney before offering that relief. That the distress of the female pelvic organs is not coincident with, but dependent upon the prolapsed kidney, is evidenced by the fact that fixation of the kidney relieves the pelvic symptoms. That prolapse may cause serious disease of the kidney itself is apparent upon careful and frequent exam-

ination of the urine. The author designates as "prolapsed kidney," the third degree of descent of the organ, that is, when the upper pole can be palpated below the border of the last rib in front; as "loose" or "movable kidney," that degree of descent of the organ where the lower pole and half of the organ can be palpated below the last rib upon deep inspiration.

The Separation of Urine From Both Kidneys and the Choice of a Vesical Divisor.—RHEAUME (*La Revue Medical*, 1902).—A resume of the history and the gradual evolution of this interesting question is given. The author then proceeds to discuss the relative value of Luys' and Cathelin's segregators, a description of both of which has been given in previous issues of the INTERSTATE'S abstract department. The urine should be collected separately from each ureter (a) when the diagnosis between vesical or renal lesion is doubtful, (b) whenever it is necessary to perform operations upon the kidney. Vesical division by the procedures of Luys and Cathelin is a simple intervention capable of being done by all practitioners, and ought to be a procedure of choice. In the great majority of cases Luys' apparatus is sufficient, but with prostatics, with *man* in general, and in small bladders, Cathelin's instrument is much preferable.

Intracapsular Extirpation of the Hypertrophied Prostate.—Rydygier (*Ann. des Mal. des Organ. Genito-Urin.*, November 15, 1902).—Two years ago the author recommended intracapsular enucleation of the prostate in order to cure its hypertrophy. Since then, in continuing this practice, he has noticed that in most of the cases he involuntarily opened the prostatic urethra, whether he operated with blunt instruments or utilized only the finger. While it is true that in his hands no patient has lost his life on this account, still it prolongs and complicates the consecutive treatment. For this reason he has endeavored to find a less dangerous method, and proposes resection of the prostate without enucleating that part nearest the urethra.

The curved transverse incision gives a freer access to the posterior face of the gland; however, the median cut is less dangerous and simpler.

After making the median cut, the tissues are separated bluntly, between the urethra and the rectum, exposing the prostate gland. A sound is introduced into the urethra in order to prevent injury to it. Having opened the prostatic capsule, the finger is inserted and the glandular tissue is freed from the capsule, leaving that near the urethra untouched. This leaves the lobe as if attached by a pedicle to the opposite lobe like a hilum. This pedicle is now clamped by a long pair of forceps at a little distance from the urethra and parallel to it in order to avoid, if possible, the ejaculatory canal. The lobe is then cut off and removed. The other side is operated upon in the same manner. The operation is ordinarily easy and less bloody than a total prostatectomy.

This is expected to relieve a urethra cramped by a hypertrophied prostate, as resection of a goitre relieves a compressed trachea.

The Diagnosis of Calculi of the Kidney by Radiography.—VERHOOGAN (*Ann. des Mal. des Organ. Genito-Urin.*, November 1, 1902).—It is with cases of uncertain symptoms, and especially in those with small calculi of the kidney or ureter, that the x-ray is most needful to differentiate between other pains about the kidney region and those due to calculi alone. Indeed, in one case the microscope even failed to demonstrate any blood whatever in the urine, and yet the radiograph and subsequent operation proved that the symptoms were due to kidney stone. The author reports three cases in which the x-ray gave negative results. Operation that was necessitated by the pain affirmed the radiographic diagnosis. In three other cases in which he was unable to arrive at a diagnosis of stone, the

radiograph gave positive results, which were borne out later by operation. The success of the radiographic picture depends upon the experience of the operator and the care with which he makes his exposure. It should be sufficiently long to penetrate the thick lumbar tissues, but not so long as to penetrate also the calculeous substance, and thus efface its shadow. Or, in other words, as the photographer should properly expose his plate to intensify certain characteristics of the subject, so should the radiographer skillfully time his rays. When the radiography is thus made with care, one can affirm that a negative or positive result thus obtained is a certain proof of the absence or presence of calculi.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

Professor v. During-Pasha's Report on Endemic and Hereditary Syphilis in Asia Minor. A Review with Remarks.—GEORGE OGILVIE, B. S., M. D. (*British Journal of Dermatology*, January, 1903).—For more than forty years syphilis has been raging in the Vilajet of Castamini (Asia Minor) to such an extent that whole villages have been laid waste by the disease. The constant diminution of the number of those fit for army service made itself felt all the more because it is from these districts that the regiments for the metropolis are chiefly recruited. Several attempts to grapple with the condition proved inefficient. In 1896 Professor v. During was commissioned by the Turkish minister of war to report on the spread of syphilis in the province and to suggest means for its suppression. In two months he made his report, but had to wait three years for its adoption, when he undertook the personal supervision of the campaign. He has achieved a task of which he may justly be proud. The province contains about one million inhabitants. Specific treatment was practically unknown, the disease being left to itself or to "empirics" often worse than the disease.

Professor v. During's paper is based upon the examination of 65,000 people in the province and on more than 30,000 cases of syphilis. Rarely were cases seen more than once, yet this mode of observation has certain advantages which even a long hospital experience or extensive private practice cannot afford. In Dr. v. During's case it has not been without considerable influence in changing his views with regard to several fundamental points in the nosology of syphilis. Without losing sight of general questions or single interesting cases, every district has been examined with regard to certain definitely formulated questions. The examination of, say, 10,000 people, amongst whom 1 to 3,000 are syphilitic, with regard to number of births, to the existence of signs of degeneration, or to questions of heredity in a narrower sense, etc., is bound to give weightier results than if one is intent on noticing every detail in these gigantic numbers. Sufficient matter has been collected to fill a number of monographs on important and unsettled questions, and the author expresses a hope that one or the other of these will in time receive the separate and thorough treatment which they deserve, while at the same time, too, he despairs of doing justice to all of them. Meanwhile he lays before the profession the general results he has come to without statistical apparatus, single histories or typical or exceptional cases. Extent and mode of observation, the rareness of an opportunity to watch nowadays the natural course of syphilis through several generations uninfluenced by treatment, not least, the distinguished scientific position of the author, render his communication one of exceptional interest and importance.

Endemic Syphilis.—The prominent and characteristic features of endemic compared to sporadic syphilis are preponderance of accidental over venereal in-

fections and the frequencies of tertiaries. While in Europe the proportion of accidental to venereal infection is at the utmost 5 in 100, the inverse proportion will come nearer the truth in Asia Minor. To see a chancre is rare (not 4 in 1,000.) The majority of the initial scars and lesions were between the navel and symphysis pubis, and due to homo-sexual intercourse. The other vehicles of infection are drinking glasses, pipes, razors, water pipe, etc. In all reports on endemic syphilis the proportion of tertiaries to secondaries is given as two to one, but, according to v. Düring, one to two will be the more accurate figures. What is the reason for this increased frequency? The author's views have been changed since his last researches and he no longer believes in the attenuation of syphilis by running through several generations.

Of true malignant syphilis only six cases were seen. Precocity and frequency of tertiaries do not constitute the character of malignant syphilis. Malignant syphilis is in its broadest sense due to want of treatment. The further away from cities and depots for treatment the greater the proportion of tertiaries and grave conditions. Poverty, malaria, tuberculosis and poor nutrition are also co-operative factors.

Destructive processes of palate, pharynx and the nose constitute about 40 per cent. of all tertiaries, the tongue was affected in 6 per cent. of cases. Leukoplakia of the mouth is frequently seen even outside of the domain of syphilis, but even if of syphilitic origin it is not influenced by specific treatment, and this is the only "parasymphilitic" lesion allowed by the author.

Diseases of the eye and nervous system were found to be remarkably rare. This may be explained by the connection between the localization of syphilis and irritation or use. Alcohol is unknown. Syphilitic functional disorders, such as neurasthenia, melancholy, etc., v. Düring does not admit. Tabes he has seen three times among the populace of towns, never in the country, and in one case only was there a previous history of syphilis. The author is a decided opponent to the doctrine of the syphilitic origin of tabes and of "parasymphilis." The "chronic intermittent" treatment by mercury as practiced by Fournier he denounces as dangerous and does not hesitate to make it responsible for the frequency of nervous disorders in the statistics published from Fournier's school.

Hereditary Syphilis.—V. Düring now attaches very little weight to his and Fournier's toxine theory of tertiarism and immunity, or any other theory of syphilitic heredity which is modeled on the pattern of some other infectious disease.

Twice v. Düring has met with fresh acquired syphilis in children the subjects of inherited syphilis. With regard to the infectiousness of congenital syphilis he expresses himself with great reserve. He does not deny it, but he states that if he had never seen an exception to Colles' law, he likewise has never seen a healthy nurse infected by a congenitally syphilitic child. Special attention has been paid to the so-called dystrophic influence of syphilis and to its degenerating effects upon racial development. v. Düring and his reviewer, Ogilvie, are of the same mind upon this point, without agreeing in the least with the French school in their conclusion that hereditary syphilitic taint is the cause of nearly all physical and moral abnormalities.

[The importance and value of this article has led to a rather full review of it.—ED.]

Local Treatment of Syphilitic Ulcerations by the Application of a Solution of Bichloride of Mercury (1 to 5000).—M. HALLOPEAU (*Annales of Dermatologie et Syphilis*, December, 1902).—M. Hallopeau remarks that he has recognized for a long time the value of local application or specific treatment of local lesions to co-operate with general medication. He has seen serpiginous syphilides disappear in a few weeks under the influence of Vigo paste together with internal treatment.

In ulcerative syphilides he soaks several layers of gauze with sublimate solution (91 to 5000), lays it over the part and fastens with a bandage.

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

Deviations of the Spine in Relation with Chronic Obstruction of the Upper Respiratory Passages.—REDARD (*Gazette Medicale de Paris*, December 6, 1902).—In 1890 the author pointed out the frequent co-existence of deviations of the spine, principally cyphoses, with chronic obstruction of the upper respiratory passages; since then many authors have adopted his conclusions.

Experimentally, Ziem has demonstrated that the nasal obstruction obtained by suturing the nostrils of young rabbits is soon followed by asymmetry of the head, scoliosis and deformity of the chest, the chest being less developed on the side corresponding to the obstructed nostril.

This co-existence is not a simple coincidence, but there is a very evident causal relation, from the fact that cure of the vertebral deviation takes place under the sole influence of the removal of the obstruction of the nose and pharynx.

Cyphosis dorsalis is very frequent with naso-pharyngeal obstruction. It is accompanied generally with thoracic deformity.

Scoliosis is less often encountered than cyphosis, but is observed quite frequently. It is generally combined with a slight degree of cyphosis.

Among the causes of these chronic obstructions may be noted adenoid vegetations, principally of that variety complicated by chronic inflammation of the neighboring mucous membrane, hypertrophy of the nasal mucous membrane, with chronic rhinitis, chronic coryza and ozena, deviations and malformations, with hypertrophy of the septum; traumatic perichondritis; presence of foreign bodies, of mucus and fibrous polypi, etc.

Hypertrophy of the tonsils play a less important role than adenoid vegetations in the pathogenesis of thoracic deformities and deviations of the spine, although we frequently meet tonsillar hypertrophy concurrent with adenoid vegetations.

The author then proceeds to describe the special characteristics of the cyphoses and scolioses which are produced by the nasal and pharyngeal obstructions. He possesses numerous observations of the cure of thoracic deformities and deviations of the spine that he has obtained by the treatment of the nasal and pharyngeal obstructions.

The author claims that it is always necessary to examine the nose and throat when one encounters these deformities or deviations. Treatment of the hypertrophied tonsils is not sufficient; it is necessary to explore the naso-pharynx and look for adenoid vegetations, for it is upon the thorough removal of these that a cure of the deformity depends. Ziem gives the following explanation of these facts: Permanent impermeability of a nostril produces a disturbed development of the bones in the neighborhood of the primitive lesion, thence comes an asymmetry of the head, whence an unequal pressure is exercised upon the spine. First the cervical portion is deviated, thence follows compensatory deviations in other regions of the vertebral column.

Ziem's theory can scarcely be applied to those cases in which the scoliosis is clearly dorsal without cervical deviation and without asymmetry of the skull and face. It is admitted that in these cases the deviation of the spine follows the thoracic deformity produced principally by the chronic pulling, and the respiratory insufficiency, especially in rachitic children and those enfeebled by nasal and pharyngeal obstructions.

The treatment consists in removing the nasal and pharyngeal obstruction to be followed by gymnastic and orthopedic treatment.

Beer-Yeast in Otolaryngology.—L. S. MOLIST (*Rev. Cien. Med. de Barcelona*, xxviii, No. 7; *Rev. Med. News*, January 3, 1903).—That beer-yeast administered by the mouth exercises a specific effect upon pyogenic organisms in suppurative conditions is not to be questioned. The author has used a special preparation of this substance, compounded from the formula of Dr. Fita, and known as "Cerevisina-Fita," in otitis media, mastoiditis and otitis externa furunculosa, with surprisingly good results, a teaspoonful being given every four hours. The pain subsided, and the swelling was markedly decreased upon the day following the administration of this remedy in a case of mastoiditis, and by the fourth day the last remnant of the inflammation had disappeared. This method of treatment was equally successful in a case of acute otitis media, with perforation of the tympanum and involvement of the mastoid cells. Local treatment had been used three days without avail, when it was decided to try cerevisina, which gave immediate relief, and the patient was completely restored in less than a week.

Laryngectomy for Malignant Disease.—HARTLEY (*New York Medical Journal*, December 13-20, 1902).—The author carefully reviews the literature from the time of the first thyrotomy performed by Brauers, in 1833, and the first laryngectomy performed by Watson in 1878. He then notes the improved methods with the higher percentages of cures, and the diminution in the death-rate for laryngectomies from 1889 to 1900, which was from 44 per cent. to 8.5 per cent. The increase of those remaining cured for three years was from 7 to 15 per cent. The reason for the steady improvement in the results is attributed to those measures adopted to avoid former frequent causes of deaths, viz., the aspiration pneumonia and the infection of cellular planes enclosing the trachea and its extension to the mediastina. The measures employed to avoid the above danger are: (1) Local anesthesia; (2) Trendelenburg and Rose's posture; (3) division of the trachea at the level of its first and third rings, and its lumen turned forward and sutured to the skin immediately preceding the extirpation of the larynx. A description of the operative technique as employed to-day is also given, and in conclusion the author reports in detail five of his own cases.

Simple Ulceration of the Vocal Cords.—PHILLIPS (*Annals of Otolaryngology, Rhinology and Laryngology*, Vol. xi, No. 4) reports the result of a careful study of a case of simple ulceration of the vocal cords, extending over a period of twelve years. The patient is presented as physically perfect with no bad habits and no history of any organic disease. When first seen he was suffering with slight dysphonia and slight hoarseness, no cough and no expectoration. Examination revealed what appeared to be a moderately large nodule, located about the junction of the middle and posterior thirds of the right vocal cord, about over the processus vocalis, a small surface of which was denuded of membrane, presenting all the appearances of a small ulcer about one-fifth of an inch in diameter. There was also a very slight infiltration about the edges of the ulcer. The arytenoids were perfectly normal, and there was no epithelial hypertrophy or wart-like looking eminences in the posterior commissure. The mobility of the cords was not interfered with, and there was no loss of voice. Silver nitrate was applied to the ulcerated surface and potassium iodide given internally. Rest from talking was also advised. After three weeks' treatment and a trip south, the ulceration had entirely disappeared, but the nodule remained for a while, but later on disappeared altogether. The patient passed through four similar experiences. The treatment was the same in all cases, but recovery was never complete until after the usual trip south. The author also reports two similar cases observed by Dr. J. Keneficks. The writer bars out taking cold and overstraining of the voice as causes for these attacks, but believes they can be attributed to climatic influences. The literature on these cases is very meager.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

The Treatment of Epithelioma of the Eyelids by the X-rays.—W. M. SWEET (*Am. Med.*, December 13, 1902).—Three cases are described.

CASE I.—Squamous—called epithelioma of twelve years' duration, beginning in the skin close to the inner canthus, extending across the bridge of the nose and finally implicating the eyelids and tissues of the orbit. The conjunctival sack was obliterated by adhesions and the eyeball was atrophic. There was constant intense itching and occasional pain. Daily seances for two weeks, every other day for one month, every third or fourth day for two weeks more, resulted in the skinning over of the denuded nasal portion and the diminution in size of the palpebral and orbital disease.

CASE II.—Epithelioma extending from the external canthus to the middle of the lower lid, and involving the skin of the cheek. Complete healing in four months (twenty-two treatments).

CASE III.—Probable epithelioma of lower lid near internal canthus. Completely healed in five weeks (ten exposures).

Microscopic sections of the tissue after a number of exposures show intense leukocytosis and degeneration of the epithelium, while normal tissue under the same conditions shows no change. Loss of sensitiveness to touch and relief of pain are expressions of trophic changes probably due to changes of degeneration in the finer nerve filaments. The technique is as follows: The healthy tissues are protected by sheets of tin-foil or lead. A low vacuum tube is placed six to ten inches from the tissue and the seance continued five to ten minutes. Serious burns which appear (if at all) from seven to ten days after the exposure, result from too prolonged or frequent exposures or when the tube is placed too near the tissue. The newly formed tissue is more pliable and less liable to contract than scar tissue. To guard against recurrence Sweet advocates a continuance of the treatment a short time after healing is completed.

The Medico-Legal Aspect of Ocular Injuries Due to Electricity.—F. TERRIEN (*Le Progres Medical*, December 6, 1902).—In the past two years Terrien has observed forty-five cases of ocular injury of electrical origin, all of which were due to an electrical discharge—short circuit—in the immediate vicinity of the victim. Cases are classified as (1) benign, (2) moderately severe, (3) severe.

Symptoms.—Redness and swelling of the skin, or, in severer cases, a superficial burn of the skin with singeing of eyelashes and eyebrows. Conjunctival hyperemia is constantly present. Circumcorneal injection, chemosis and edema of the lids are rare. Within a few days a scanty mucopurulent secretion appears which consists microscopically of fibrin enmeshing leukocytes and epithelium. In about one-third of the cases a transient ciliary injection denotes hyperemia of the iris and uveal tract. Ophthalmoscopically the retina is hazy, the papilla and large vessels are blurred. The writer has never observed lenticular changes. The patient complains of itching, pricking and a sensation as if a foreign body were beneath the lid.

Functional Disturbances.—Immediately following the injury there is an intense dazzling, which is succeeded in a few minutes by an equally transient erythropsia. Central vision is always impaired and the field is contracted. Fixation is difficult or impossible on account of the quivering of objects. In severe cases the foggy vision may be due to a true central scotoma. This diffi-

culty of fixation and the contraction of the visual field are the last two symptoms to disappear.

Nervous Disturbances.—An early symptom is photophobia. Later, headache of a neuralgic character, pain in and around the eyeballs and a sensation as if a band were compressing the head. Pain is evoked by pressure on the globe, on the ciliary region and at the points of emergence of the supra- and infraorbital nerves. The severity of the pain thus evoked is directly proportional to the intensity of the trouble. There is occasional hyperesthesia of the skin and conjunctiva.

Motor Disturbances.—There is usually blepharospasm and occasionally a true contraction of the orbicularis palpebrarum which may persist several months. As a rule pupillary reaction is normal. If the pupils contract and immediately dilate under continued light stimulation, or if the pupils are dilated and do not react to light, the prognosis should be guarded.

Secretory Disturbances.—Secretion of tears is often excessive and is increased on exposure to light. Some cases exhibit lachrymal crises.

The ophthalmoscopic findings, diminished visual acuity, and consistently contracted field (as determined by repeated observations), taken in conjunction with the symptom group, will exclude malingers. It is sometimes very difficult to differentiate the immediate effects of the accident from neurotic conditions resulting remotely therefrom. From the medico-legal standpoint this matters little, as the physician need concern himself only with the degree of incapacity for work. Recurrent hyperemia of the conjunctiva, marked and persistent photophobia, inverse action of the pupil, widely dilated pupils, severe neuralgic pain with pain on pressure on the globe and on the points of emergence of the supra- and infraorbital nerves, are of grave prognostic import.

Associated Movements of the Head and Eyes.—W. C. POSEY (*Jour. A. M. A.*, November 29, 1902).—In man movements of the head not only augment the range of the field of vision, but “supplement the action of the extraocular muscles in the delicate task of maintaining proper visual axes.” Posey classifies associated movements of the head and eyes into four groups:

1. Movements which are physiologic, *i. e.*, movements of the head supplementing or augmenting the action of the extraocular muscles.

2. Abnormal, independent, but simultaneous movements, *e. g.*, in disseminated sclerosis, sclerotic foci in the vicinity of the nuclei of the extraocular muscles and the neck muscles produce simultaneous but independent motions of the eye (nystagmus) and of the head.

3. Compensatory movements, as, for example, when the function of an imperfectly acting ocular muscle is assumed vicariously by the neck muscles. To this group Posey assigns cases of torticollis (*spasm* of the sterno-cleido-mastoid) resulting from paralysis of one of the vertical eye muscles. He describes a case where paralysis of the right superior rectus induced a right-sided torticollis.

4. Related but not compensatory movements, *e. g.*, simultaneous movements in head and eyes which occur in conjugate deviations (as in brain abscess). Another type is the up and down or side to side movement in so-called spasmus nictans, where the movements of the eyes may or may not correspond.

Motions of the head cease when the eyes are bandaged or are deviated in certain directions. An exhaustion or irritation process of the ganglion cells which innervate the muscles of the head and neck is believed to be the cause of the movements. Wagging of the head (occasionally seen in miners' nystagmus) is due to a motor exhaustion of the cortical centers.

BOOK REVIEWS.

TRAITE DE TECHNIQUE OPERATOIRE, par CH. MONAD, Professeur agrege a la Faculte de Medecine, de Paris, Chirurgien de l'hopital Saint Antoine; Membre de l'Academie de Medecine, et J. Vanverts ancien interne laureat des hopitaux de Paris; Chef de Clinique a la Faculte de Medecine de Lille. Tome premier, avec 932 Figures dans le Texte. Paris: Masson et Cie., Editeurs, Libraires de l'Academie de Medecine. 120 Boulevard Saint-Germain. 1902.

We have before us the first volume of what seems destined to be, when complete in a few weeks, the most extensive work of its kind in existence. The first volume alone contains 960 pages and is illustrated by 932 figures in the text. The second part is advertised to appear this month and the two are to cost 35 francs (about \$7.00). The idea of the book is, as the name implies, not to give the indications for this or that operative procedure, but rather to lay them all before us, presupposing in the surgeon sufficient acumen to enable him to decide which one is best applicable to the case at hand. Such a work can, then, never be considered as a student's text-book. It is rather a guide for the practitioner, and is by virtue of its great size in a position to furnish all the details to the man who has mastered the earlier general considerations.

The first volume is divided into three portions. No. 1 treats of anesthetics, antiseptics, hemostasis, etc.; No. 2 deals with the operations on the various tissues as such, while No. 3 takes up the subjects which occur in connection with the head, neck and chest (breast included), as well as those which are commonly performed upon the extremities. The second volume will be devoted to a consideration of the surgical affections of the digestive tract and the genito-urinary tracts of the male and female. We are thus reminded that the French still regard gynecological surgery as a part of general surgery.

Especial care seems to have been paid to the treatment of the more recent advances in surgery. Excision of the cervical sympathetic ganglion has in the recent past demanded a good deal of attention; still the operator who found occasion to perform the operation was surprised to note how little could be found on the anatomy or the surgery of the subject. This matter is taken up and fully illustrated by the authors whom we are considering. American readers will be greatly interested in another matter treated in the chapters bearing upon the surgery of the nervous system, viz., excision of the Gasserian ganglion. This article is of chief value to us because we become in it better acquainted with French methods, from the fact that they (especially that of Porior) are given the greatest prominence. This excellent idea, differing essentially from those of Hartly and Cushing—the ones most in vogue in our country—deserves a nearer acquaintance than can be secured from our text-books or from the casual mention accorded it in our journal articles.

To us it seems very strange to find all the especial eye operations in a work devoted to the technique of general surgery; but here it is, and we have at least a set of beautiful cuts, whether they be of value to us or not.

The native fineness of the Frenchman makes him an adept at the plastic surgery of the face; hence we are not surprised to find the chapters pertaining to this subject above the average, presenting as they do in detail the original methods of Nelaton, Lisfranc and the other masters in this line.

The nose, throat and ear, like the eye, come in for their share of treatment in this excellent technical work on general surgery.

TRAITE DE TECHNIQUE OPERATOIRE, par CH. MONOD, professeur agrege a la Faculte de medecine de Paris, chirurgien de l'Hopital Saint-Antoine, membre de l'Academie de medecine, et J. VANVERTS, ancien interne, lauréat des hopitaux de Paris, chef de clinique a la Faculte de medecine de Lille. 2 forts volumes gr. in-8^o, avec 1907 figures dans le texte. Masson et Cie, editeurs. 40 fr.

The second volume of this brilliant French work appeared on time, and now we have it in its complete form. The second part is deserving of all the praise which was bestowed upon its companion when the latter arrived some months ago. The French are as far ahead of the Germans in operative technique as the latter are in advance of them in original investigation; hence the value of a French work upon technique becomes apparent. While the illustrations of French medical and surgical works are, as a rule, not their strong point, as far as quality is concerned, still they are so numerous in the book under discussion that it is not necessary for the reader to be a past master of the language in order to derive benefit from it. The second volume forms an immense work of more than a thousand pages and of almost as many illustrations, being of about the same extent as its bulky mate. The volume now before us treats of the mouth, pharynx, esophagus, stomach, intestine, rectum, anus, laparotomy, liver, spleen, kidneys, ureter, bladder, prostate, and the genitory organs of the male and the female. One can hardly expect the authors of such a work to discriminate for him as to the choice of this or that method in a given case; it must, as in the present instance, ever be sufficient if all the best known methods are given in review, then the surgeon must look to other sources for aid as to a choice, as he does for points on diagnosis and prognosis. In surgery, as in all other lines, different methods are adopted in the various countries for attaining the same ends, so if the operator would be well-equipped he must be in possession of the technique as represented in at least the leading three languages of science. In French there is surely no other book of its kind which can compare on quality or extent with that of Monod and Vanverts.

THE MENTAL FUNCTIONS OF THE BRAIN. By BERNARD HOLLANDER, M. D., London. G. P. Putnam's Sons, New York and London.

This volume has excited a great deal of comment, as well as much adverse criticism. Its purpose is to clear up the mystery of the fundamental psychical functions and their localization in the brain. The author bases his localizations chiefly on clinical and pathological investigations. Over eight hundred cases are adduced, not merely of the recognized varieties of mental derangement, but of all kinds of deviations from the normal mind, even as regards the manifestations of hunger and thirst. The author found that his localizations confirmed those made a century ago by Gall, whose marvelous discoveries of the anatomy and physiology of the brain, on which Spurzheim based his system of phrenology, were ignored even by his most scientific followers, so that the world is ignorant of them, and they are presented for the first time in this book. A volume with such a serious purpose, and towards the preparation of which the author has given so much earnest thought and diligent research, is worthy of serious attention. It can be said that the book is of great value and is almost unique in that it forms the most complete collection of well-authenticated cases which supports the view of psychical localization that we have. That the author's conclusions cannot be shared by the unprejudiced and well-informed reader does not take away anything from the value of the material he has so carefully collected. The chief criticism that can be directed against the author's views is that, at present, the knowledge that we possess of localization in general is too meager to justify any serious attempt to map out the brain surface in areas of psychological func-

tion. The effort of the author to give due credit to Gall is to be praised, especially so as we are in possession of no work which contains an adequate presentation of his views except the original four volumes, published in 1810-1819, entitled "Anatomie et Physiologie du System Nerveux en General et du Cervau en Particulier." As these volumes are difficult to obtain and very costly, they are seldom read, and if Gall is entitled to the place which Hollander claims is his by right, then it is an act of justice that he should be given it. In so far that part of the work relating to Gall is an addition to our knowledge and a service to the world at large. The question as to the permanent value of Gall's work is another matter, and no amount of heroics will make them so. The test of their value will be found in their correctness, which at present, however, is not susceptible of proof one way or the other. Whatever evidence we possess is arrayed against the assumption of definite areas of psychical activity on the brain surface. The book, after all, is well worth reading, and the author's painstaking industry and the careful presentation of his own views are to be much commended. No one can read this volume without being convinced of the author's sincerity and evident desire to furnish the most scientific proof of his contention which at the present state of our knowledge it is possible to offer.

THE PRACTICAL MEDICINE SERIES OF YEAR-BOOKS. Under the general editorial charge of GUSTAVUS P. HEAD, Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Vol. 10, Skin and Venereal Diseases. Edited by W. L. Baum, M. D., and Hugh T. Patrick, M. D., Chicago. The Year Book Publishers. 1902.

This is an admirable series, far in advance of any year-book that has yet appeared. The tenth volume is an especially good example of the plan which these little volumes are intended to carry out. The review of neurology by Patrick can be praised without stint for the clearness and good judgment with which the year's literature has been abstracted, selected and analyzed. For the general practitioner, for whose advantage the series is published, this volume must be of great service. The careful index adds greatly to the value of a volume which admirably fulfills the purpose for which it is written.

THE AMERICAN TEXT-BOOK OF OBSTETRICS. In two volumes. Edited by RICHARD C. NORRIS, M. D.; Art Editor, Robert L. Dickinson, M. D. Second edition, thoroughly revised and enlarged. Two handsome imperial octavo volumes of about 600 pages each; nearly 600 text-illustrations and 49 colored and half-tone plates.

This is a work for the student and practitioner alike. It makes clear those departments of obstetrics that are at once so important and usually so obscure to the medical student. The obstetric emergencies, the mechanics of normal and abnormal labor, and the various manipulations required in obstetric surgery are all described in detail, and elucidated with numerous practical illustrations.

Since the appearance of the first edition many important advances have been made in the science and art of obstetrics. In this new edition, therefore, a thorough and critical revision was required, some of the chapters being entirely re-written, and others brought up to date by careful scrutiny. A number of new illustrations have been added, and some that appeared in the first edition have been replaced by others of greater excellence. By reason of the extensive additions the new edition has been presented in two volumes, in order to facilitate ease in handling. The success primarily achieved unquestionably awaits this present edition.

OBSTETRICAL NURSING FOR NURSES AND STUDENTS. By HENRY ENOS TULEY, M. D., Louisville, Ky., Professor of Obstetrics, Kentucky University, Medical Department. Pages, 202. Price, cloth, \$1.00 net. G. P. Engelhard & Company, Chicago. 1902.

Although originally written for the use of the nurses in the City Hospital Training School of Louisville, this little volume certainly will prove a reliable guide to the junior student in his studies of the more elaborate text-books of obstetrics. It contains a large amount of practical information on obstetrical nursing.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M. D., assisted by H. R. M. Landis, M. D. Volume IV. December, 1902.

The December volume contains the following departments: Diseases of the Digestive Tract and Allied Organs, the Liver, Pancreas and Peritoneum, by Max Einhorn, M. D.; Anesthetics, Fractures, Dislocations, Amputations, Surgery of the Extremities and Orthopedics, by Joseph C. Bloodgood, M. D.; Genito-Urinary Diseases, by William T. Belfield, M. D.; Diseases of the Kidneys, by John Rose Bradford, M. D., F. R. C. P.; Physiology, by Albert P. Brubaker, M. D.; Hygiene, by Charles Harrington, M. D.; Practical Therapeutic Referendum, by E. Q. Thornton, M. D.

This volume, like its predecessors, will be found a real treasury of information by the busy practitioner, who is not able to follow closely the current literature.

HOW TO SUCCEED IN THE PRACTICE OF MEDICINE. By JOSEPH M. MATHEWS, M.D. John P. Morton & Co., Publishers, Louisville, Ky. Price, charges prepaid, \$2.00.

Charles A. L. Reed, the ex-President of the American Medical Association, said of this volume: "It is one of the significant books of the year. I recall no recent book written in a more captivating style, and I am sure that it will be read by practically the entire profession. It appeals with particular force to every medical student and to every recent graduate."

LEITFADEN FÜR DEN GYNAEKOLOGISCHEN OPERATIONSKURS. Für Aerzte und Studierende. Von DR. E. G. ORTHMANN, Berlin. Mit 86 Abbildungen. Verlag von Georg Thieme, Leipzig. 1899. Price, \$1.15. (G. E. Stechert, New York.)

While teaching operative gynecology on the cadaver during a period of ten years, the author was asked by a great number of his pupils to compile, in the form of a little manual, the descriptions of all the typical gynecologic operations. He complied with their request, and produced this excellent booklet. It embodies in a concise and clear manner the indications and the technic of all the operative procedures which, in the long practical experience of the author and his chief, Prof. A. Martin, proved the most satisfactory ones.

DISEASES OF THE SKIN. By JOSEPH GRINDON, Ph. B., M. D. Lea Brothers & Co. 1902.

Dr. Grindon has written a most excellent and comprehensive little book of three hundred and seventy-seven pages. It is one of Lea's series edited by Dr.

B. B. Gallaudet, and like all such books is intended to place the subject in its most practical aspect before the reader. The author has been most successful in this respect, his peculiar epigrammatic style forcibly assists in impressing the reader with the points of the text. An example of this occurs in the discussion of diet in the treatment of eczema on page 97, when he says: "The frying pan, the pill box and the whiskey bottle are the trinity which support the American profession." The manner in which the book is written deviates somewhat from the well-trodden text-book style and diction, which renders it rather more readable than otherwise, and books in series such as these of Lea's are written for the student to impress the text upon his memory.

The illustrations are excellent and well selected. The volume is handsomely bound, and does great credit to the author and his publisher.

DIE PHYSIKALISCH-DIAETETISCHE THERAPIE IN DER AERZTLICHEN PRAXIS. Von Dr. BERNHARD PRESCH. Wuerzburg: A Stuber's Verlag. 1902. Parts 1 and 2.

The physical and dietetic measures useful in the treatment of disease are winning for themselves a constantly increasing attention on the part of the medical profession. The literature of the subject has, however, until recently, been scattered throughout the great world of medical periodicals, and so has been quite inaccessible to the busy practitioner. Goldscheider and Jacob's book on this subject, while complete, is too voluminous and very expensive. There was distinct need of a concise compendium which, while free from speculation and theorizing, would offer the practitioner the practical hints he desires. This field is well filled by Dr. Presch's volume, two of the six parts of which have already appeared. The complete work is to consist of 600 to 700 octavo pages and is to cost twelve marks, complete. The first portion, arranged alphabetically like an encyclopedia, takes up each pathological condition in turn and briefly recounts the dietetic and physical procedures suitable to it; the second portion is to consist of a detailed description of the technique of hydro- and electrotherapy, of aero and pneumotherapy, massage, gymnastics, dietetics and psychotherapy. To be sure, the book has the faults of its virtues. One who wishes to learn something about the less important or less definitely recognized methods of physical or dietetic treatment will have to consult the larger work of Goldscheider. In its own field, however, we can unreservedly recommend the book to those of our readers who understand German. It deserves to be translated.

DIE BEDEUTUNG DER IONENTHEORIE FUER DIE PHYSIOLOGISCHE CHEMIE. Von Dr. THEODOR PAUL. Published by F. Pietzcker, Tuebingen. 1901. 8°. Pages 36.

This little pamphlet is a reprint of an address delivered before the convention of German scientists and physicians, at Hamburg in September, 1901. It consists of a brief account of the theory of ions and of the meaning of the terms acidity and alkalinity from the point of view of that theory. The latter half is devoted to an account of a series of experiments made by the author in investigating the effect on the bactericidal power of an antiseptic solution of the addition of various inert salts, whose presence diminishes the number of ions of the antiseptic in the solution.

THE DISEASES OF INFANCY AND CHILDHOOD. Designed for the Use of Students and Practitioners of Medicine. By HENRY KOPLIK, M. D. Lea Brothers & Co. 1902, Illustrated. Pages 650.

With the growing interest in pediatrics, and in view of the great amount of research work in the field in the last decade, the advent of a new text-book is al-

ways a matter of interest. Dr. Koplik has made a distinctly valuable addition to pediatric literature. The volume is clear, concise and condensed. Indeed, it is questionable whether the condensation has not been carried to a degree that is regrettable.

A noteworthy feature is the constant reference to the views of, and constant excerpts from the writings of, foreign and American pediatricists. With all this, however, the book is not to be considered as a compilation. Dr. Koplik's views have been reached as the result of very extended observation, and evidently careful analysis, and his book is the expression of them.

The chapter on the specific infectious diseases is an especially valuable one, perhaps the best in the book. The various exanthemata are clearly and succinctly described. Clear and detailed descriptions of the technique of lumbar puncture, its scope and indications are given.

Under the head of tuberculosis, the author says that he believes that the diagnosis of tubercular tracheo-bronchial lymph node during life is always highly uncertain. (Page 247.) This is not altogether in accord with the views of many leading authorities. But it is just the expression of such individual views, and there are many instances of this sort in the book, which add in a way to its value.

The illustrations, which for the most part are original, are exceptionally good, and truly illustrative. The book-work is quite up to the standard of the publishers.

THE DEVELOPMENT OF THE HUMAN BODY. A Manual of Human Embryology.

By J. PLAYFAIR McMURRICH, A. M., Ph. D., Professor of Anatomy of the University of Michigan. With 270 illustrations. Philadelphia: P. Blakiston's Son & Co. 1902. Price, \$3.00 net.

This book constitutes an attempt to present a concise statement of the development of the human body and a foundation for the proper understanding of the facts of anatomy. The assimilation of the enormous mass of facts constituting what is usually known as descriptive anatomy has always been a difficult task for the student. This difficulty is largely due to the lack of information regarding the causes which have determined the structure and relations of the parts of the body. Therefore the author has adopted the explanation of the *why* things are so as the underlying principle in this description of the development of the human body.

The book is written in a clear and concise manner and bears ample proof of the author's comprehensive grasp of the subject. The illustrations and the success of the writer in adapting this book to the needs of the student are worthy of high praise.

PRACTICAL OBSTETRICS. A Text-book for Practitioners and Students. By EDWARD REYNOLDS, M. D., and FRANKLIN S. NEWELL, M. D. Illustrated with 252 engravings and three colored plates. Lea Brothers & Co., Philadelphia and New York. 1902.

The favorable reception accorded to an earlier volume which aimed only at rendering the technical details of obstetrical practice accessible to the student, and was, therefore, intended to be merely an accessory to the larger text-books, has induced the authors to rewrite the book on a more extended scale. It is now a complete text-book on obstetrics, characterized by a distinct accentuation of the practical side of this science. The up-to-date appearance of the volume is impaired by the fact that some of the illustrations seem to be taken from antiquated publications. A drawing, representing the application of the forceps or the perforation of the skull, which shows the arms of the operator neatly draped

with coat sleeves and cuffs is decidedly anachronistic in a modern text-book of obstetrics.

This book will prove a reliable guide to the general practitioner.

THE PRACTICAL MEDICINE SERIES OF YEAR-BOOKS. Comprising ten volumes on the Year's Progress in Medicine and Surgery. Issued monthly. Under the general editorial charge of GUSTAVUS P. HEAD, M. D. Volume II.: General Surgery. Edited by J. B. MURPHY, M. D. November, 1902. Chicago: The Year-Book Publishers, 40 Dearborn street. Price, \$2.00.

This small volume is designed to be one of a series of ten which are to cover the entire field of medicine and surgery. The work is avowedly one for the general practitioner, the division into so many volumes being supposed to be eminently suited to his needs. The number on surgery contains 547 pages and 44 cuts, and is arranged into chapters on special and general surgery. Really a vast amount of material, in several languages, has been reviewed, and it will be a help to the original investigator to find that all the literature references have been given in foot-notes. The introduction is in reality a fine editorial on the trend of the surgical thought of the year which has just passed.

THE MEDICAL EPITOME SERIES. Genito-Urinary and Venereal Diseases. A Manual for Students and Practitioners. Illustrated with 21 engravings; 249 pages. By LOUIS E. SCHMIDT, M. Sc., M. D. Series edited by V. C. PEDERSEN, A. M., M. D. Lea Brothers & Co., Philadelphia and New York, Publishers.

A most excellent manual. The author has accomplished the difficult task of writing a complete *expose* of the subject in a few words. In addition to containing all the essence of the familiar and well-tried methods in genito-urinary diseases, the book includes within its pages all that is of worth in the most recent literature. A useful feature is the set of questions at the end of each chapter, which not only makes the volume suitable for quizzing, but preserves the continuity of the text unbroken, and avoids that most disagreeable annoyance to the reader of having the questions interrupt the regularity of the reading matter.

DR. JESSNER'S DERMATOLOGISCHE VOERTRAGE FUER PRAKTIKER. (Second revised edition.) Wurzburg: A. Stuber's Verlag (C. Kabetzsch). 1902.

For those who read German, these little monographs upon practical dermatologic subjects are exceedingly helpful. They are written in a simple, clear, practical manner, bringing each subject up to date. They are more comprehensive than a text-book, yet not too technical to be confusing. The following parts of this series have been received.

Heft I.—Des Haarschwunds Ursachen und Behandlung.

Heft II.—Die Akne und ihre Behandlung.

Heft III.—Pathologie und Therapie des Hantjuckens. I. Teil. Allgemeine Pathologie und Therapie; Pruritus Simplex.

Heft VI.—Die kosmetische und therapeutische Bedeutung der Seife.

Heft VIII.—Dermatologische Heilmittel (Pharmacopoea dermatologica). This is a splendid review of the preparations and uses of the principal dermatological remedies and bases.

Heft IX.—Die Hautleiden kleiner Kinder.

BACTERIOLOGICAL TECHNIQUE. A Laboratory Guide for the Medical, Dental, and Technical Student. By J. W. H. EYRE, M. D., F. R. S., Edin., Bacteriologist to Guy's Hospital, and Lecturer on Bacteriology at the Medical and Dental Schools, etc. Octavo of 375 pages, with 170 illustrations. Philadelphia and London: W. B. Saunders & Company. 1902. Cloth, \$2.50, net.

The reviewer has never read a better book upon the subject dealt with in this volume than the one at hand. The matter is presented in a manner that will claim the attention of students of bacteriology. It is self-evident that one who writes upon the technique of such a subject as bacteriology must be one who is perfectly familiar with the subject. Technical methods spoken of in this work are, in a large measure, original methods. Original methods in technique are constantly welcome to all workers in laboratory subjects. Consequently, Eyre's book will appeal to all who desire enlightenment along this line.

GRUNDZUEGE DER GYNAEKOLOGISCHEN MASSAGEBEHANDLUNG. Von Dr. LUDWIG KNAPP in Prag. Verlag von Fischer's medicinisch. Buchhandlung, Berlin. 1902. Price, \$—45. G. E. Stechert, New York, Agent.

In this booklet of 74 pages the author gives a short but complete and clear treatise on gynecological massage. He describes its technique, the indications and limitations of its use.

But a very few of the text-books on gynecology devote enough, if any, space to a satisfactory consideration of this subject. Massage is to-day one of the most efficacious therapeutic agents of the European gynecologists, but altogether too much neglected in this country. We hope that this little book will help to propagate a better understanding and appreciation of this mode of treatment which yields so satisfactory results in the hands of the experienced.

BEITRAEGE ZUR AETIOLOGIE DER PSYCHOPATHIA SEXUALIS. Von Dr. IWAN BLOCH, Berlin. Zweiter Thiel. Verlag von H. R. Dohrn, Dresden. 1903. Price, Mark 10.

We will refer here to the October number of the JOURNAL, which contains a review of the first volume of this work, alluding to its merits. In this second volume, just published, the author continues and concludes his investigations in the etiology of sexual perversion. He reports the results of his researches of the special etiology of masochistic and sadistic phenomena, and of the compound types of perversity. As stated in the preceding review, the author arrives, from his usually painstaking studies, at the conclusion that the belief of sexual perversity being an inherited condition should finally be abandoned.

OPERATIVE GEBURTSHUELFE FUER AERZTE UND STUDIERENDE. Von WILHELM NAGEL, Professor of Obstetrics in the Royal Friedrich-Wilhelm University of Berlin. Mit 77 Abbildungen in Texte. Verlag von Fischer's medicinisch. Buchhandlung. Berlin. 1902. Price, \$2.50. G. E. Stechert, New York, Agent.

The author of this book is the first assistant of Professor Gusserow's obstetrical clinic in Berlin, himself a well-known writer on obstetrical problems. He gives a very lucid *expose* of the technique and the indications of the obstetrical operations as practiced in this famous school of midwifery in Berlin. Devoting its space entirely to the operative part of this specialty, the volume naturally contains very detailed descriptions of all operations. The value of the book is considerably enhanced by a great number of good half-tones, all of which are origi-

nal. No other text-book in the English, French or German language brings better or more instructive illustrations of version and extraction. While the author's teachings do not greatly differ from those of our own country, a perusal of this excellent book will prove of no small interest to the American practitioner.

LEA'S SERIES OF MEDICAL EPITOMES SCHALEK ON DERMATOLOGY. A Manual of Skin Diseases for the Use of Students and Practitioners. By ALFRED SCHALEK, M. D., of Rush Medical College, Chicago. In one handy 12mo volume of 225 pages, with 34 illustrations. Cloth, \$1.00, net. Lea Bros. & Co., Publishers, Philadelphia and New York. 1902.

Epitomes are not *offered* by their authors and publishers as substitutes for larger text-books, but unfortunately they are too often used as such. This booklet is an epitome, therefore it is very brief, very concise, very easy to "cram," very well printed and bound, and, like all of its kind, its real value to "students and practitioners" very questionable. But we must in justice say Dr. Schalek has done exceedingly well, considering the space allotted him. It must be a very difficult undertaking to boil down into a book of this size the subject of dermatology.

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